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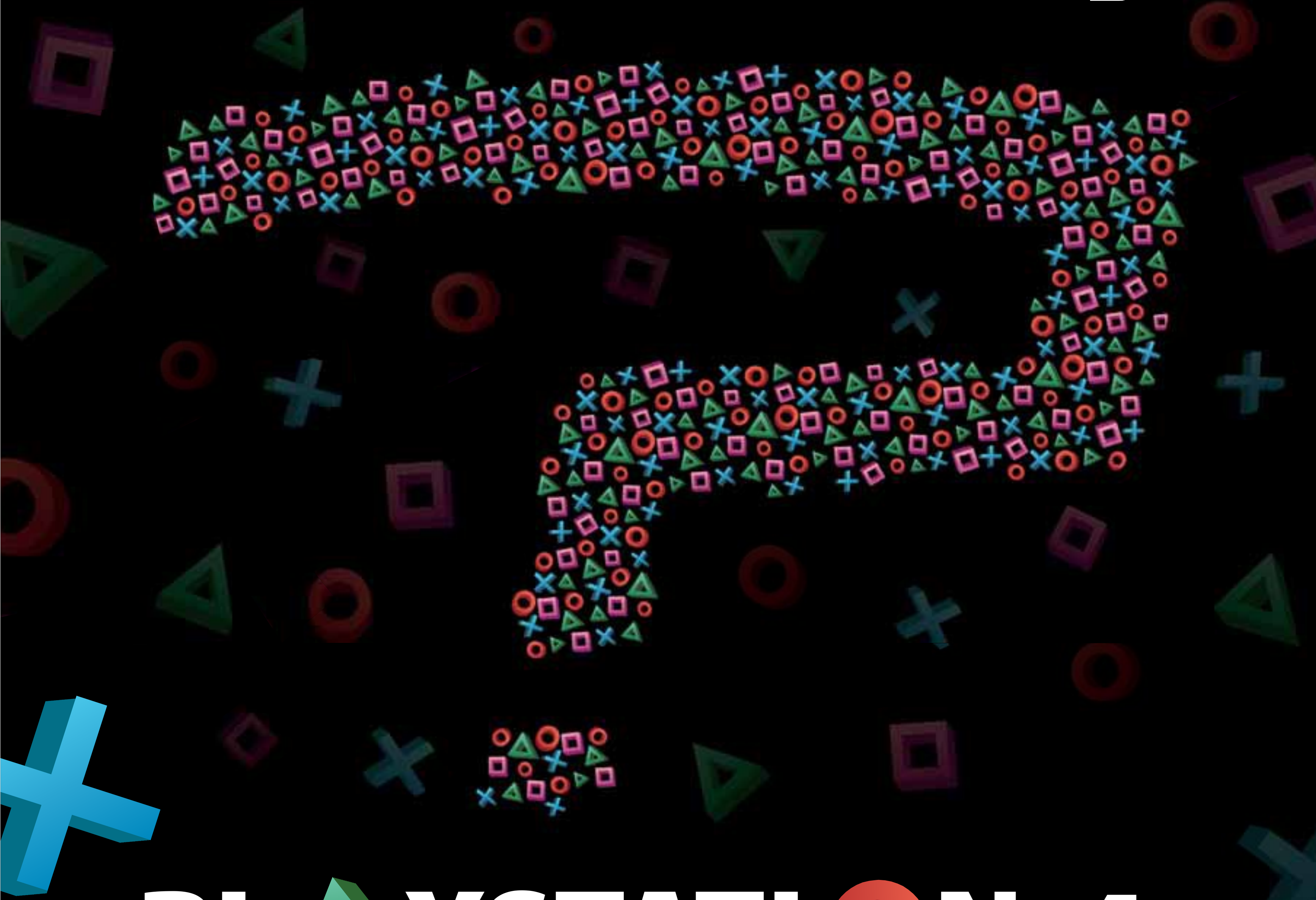

PLAYSTATION 4

What does Sony's new console mean for your studio and the rest of the games industry?

INSIDE ▸ GAMES ENGINES ▪ CANADA ▪ KEN LEVINE ▪ BINK 2 ▪ INDIE PUBLISHING ▪ JOHN ROMERO

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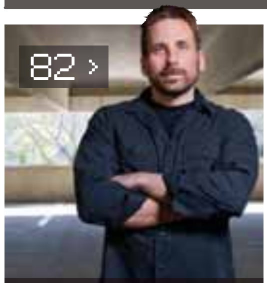

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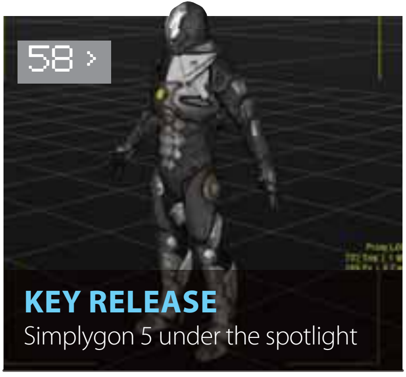

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Simplygon 5 under the spotlight

EDITORIAL

WORLDS APART

IN THE DAYS leading up to this issue of *Develop* being printed, Sony did what everyone expected of it and revealed the PlayStation 4.

You can learn all about the console and the developer community's reaction over the following pages. In short, games makers have offered a mixed, balanced response that can be boiled down to a combination of excitement about a new platform and caution about reaching conclusions without more information.

In the world of the broader internet, it seems the reaction – from public and press – has been rather more towards the negative.

Sat inside the Manhatten theatre where Sony made their announcement, however, it was hard to deny the reaction to the news was positive. Sure, the whole event was a carefully orchestrated and heavily biased, but the audience's noise in the room clearly demonstrated optimism.

Watching a re-run of the live feed of the launch event, things felt a little different; there appeared to be muted cheers and awkward pauses.

I'm not saying that 'you had to be there'. After all, free from the glitz of the main event, observers could argueably make a more objective analysis.

Rather, it's the difference of response in that theatre room and beyond its walls that was striking.

Between the two, there was a void of opinion, and that's where to find the answers about PS4.

I remain optimistic about Sony's next console, as I do for every forthcoming games platform. But then I bought a GP2X and a Neo Geo Pocket Colour.

Will Freeman
will.freeman@intentmedia.co.uk

Will

develop iPad

Videos are available within the iPad Edition of **Develop** on iTunes and the Browser-based Digital Edition, which can be accessed at **develop-online.net**

THIS MONTH: Killzone: Shadow Fall on the PS4 **Epic's Unreal Engine 4 'Elemental' PS4 demo** Sounding out Tomb Raider 2013

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PS4

Does it get right what PS3 got wrong?

Has Sony really bucked the trend and made its most developer-friendly console yet? The industry speaks its mind

Wish Studios co-founder Caspar Field remains optimistic about the PS4's support for developers

by Will Freeman

WHEN SONY UNVEILED its PlayStation 4 last month at a high-profile event in New York, one message was clear.

The machine, insisted several Sony execs, is a platform designed first and foremost for developers, and created with input from the development community, with an SCE team working for five years with studios globally to craft a system architecture that satisfies the demands of games makers everywhere.

The PlayStation 3, and other Sony gaming formats before it, was infamously difficult to develop for, and notoriously unwelcoming to many studios, meaning getting the PlayStation 4 right is key to Sony in its fight to win the next console race.

"We wanted to hear from developers," insisted Mark Cerny, speaking on stage at the PlayStation 4 launch event. "We spoke to dozens of the best teams in the world. We wanted to know what was important to them. We wanted to make them happy, because if they were happy, we knew we could unleash the creativity and innovation that would result in a true next generation experience. Our goal is to create an architecture that will facilitate the expression of their ideas."

And, Cerny insisted, the PlayStation 4 would not take its current form without games developers' involvement.

"Their comments were invaluable in crafting the system specs," he said. "We were able to create, in PlayStation 4, a platform by game creators, for game creators. It is a powerful and accessible system, and it has a deep feature set to support the ongoing development and evolution of gaming itself. The architecture we chose is like a PC in many ways, but supercharged to bring out its full potential as a gaming platform."

But do his comments hold water, and how does the global games development community feel about the PlayStation 4, its specifications, and the opportunity it offers developers? And, most importantly, will it get right what the PlayStation 3 got wrong?

HIGH PRAISE

Certainly, there are many developers that seem convinced by Sony's new offering, with

PS4: THE INDUSTRY REACTS

"The fact that Sony have finally adopted a PC architecture makes me believe there may be a god, especially after many years cursing the obscure hardware they always made us code to."

Byron Atkinson-Jones
Founder, Xiotex

"We are excited about the possibilities of GPGPU given the RAM is unified and fast. That will result in some really interesting technologies going forward, and we were happy to see GPGPU shown in the reveal."

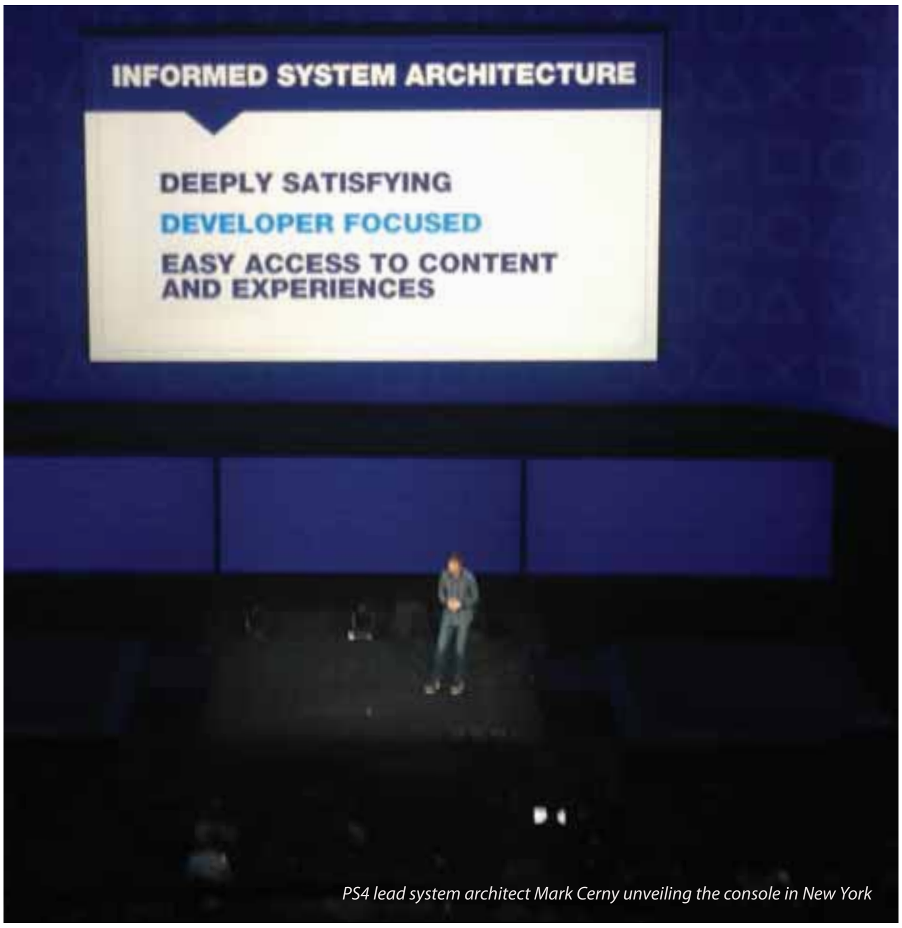
Colin Riley
Director of Games Tech, Codeplay

"If Sony can pull this off and have everything ready for PS4 launch then the next generation is looking very rosy indeed. The PS4 sounds like both gamers' and developers' dream machine."

Robert Troughton
MD, Pitbull Studios

"It was great to see non-triple-A products share the spotlight at the reveal. I think it showed that Sony wants to keep itself relevant to the now-diverse range of developers."

Ed Fear
Creative Producer, Mediatonic


INFORMED SYSTEM ARCHITECTURE
DEEPLY SATISFYING
DEVELOPER FOCUSED
EASY ACCESS TO CONTENT AND EXPERIENCES

PS4 lead system architect Mark Cerny unveiling the console in New York

studios like Climax being quick to praise the PS4's advantages over the PS3.

"In terms of the ease of PS4 development, it's much easier to develop for," offered Simon Gardner, CEO at confirmed PS4 developer Climax, speaking to *Develop*. "The tool chain is an advancement over the PS3 and everything about it is slicker, simpler and much more developer-friendly. We were very pleased with the 8GB of memory, and the compute shader system is very powerful."

And Gardner is not alone, with others queuing up to praise the PS4.

"We're most impressed by Sony's change of attitude toward their platforms," stated James Marsden, MD of *Velocity* developer FuturLab. "PS3 launched with Sony's first-party publishing having a strong preference toward triple-A showcases, and a pretty blunt disregard for anything less than that, including 2D games, whereas now they're much more supportive of good ideas and fun, well-designed games, regardless of production value."

> ***"The tool chain is an advancement over the PS3, and everything about it is slicker, simpler and more developer-friendly."***
>
> Simon Gardner, Climax

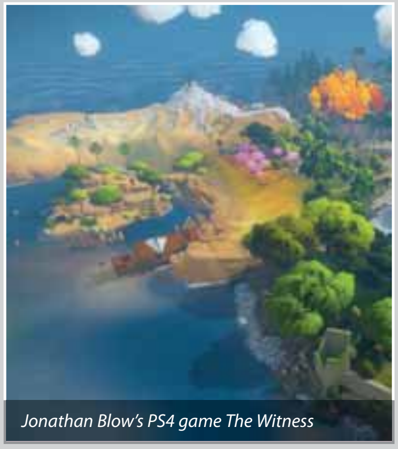
And over in the world of triple-A games, Ubisoft were predictably optimistic, standing as they do as a registered PS4 developer. But like Marsden and Gardner, Yves Guillemot, co-founder and CEO of *Watch Dogs* developer Ubisoft, did recognise failings with the current generation. In particular, he alluded to the PlayStation 3's infamously troublesome developer accessibility.

"PS4 is a great machine; we'll be able to make things look fantastic," Guillemot told *Develop*. "Because the teams are working

▶

WHAT ABOUT US?

Is the PS4 really that open to small studios?


Jonathan Blow's PS4 game The Witness

SCE's Michael Denny

Mode 7's Paul Taylor

REVEALING THE PLAYSTATION 4's existence in New York, Sony executives briefly mentioned the platform's support for indies a number of times.

SCE SVP of Worldwide Studios Michael Denny in particular used some of his on stage time at the event to promise support for small teams, even going as far as to introduce indie icon and *Braid* creator Jonathan Blow on stage to confirm that his title *The Witness* is heading to PS4.

But each reference to independents was fleeting, and as such questions remain from teams without the capacity for triple-A production. How high will the dev costs be for PS4? How will the marketplace and the submission process function? Sony is yet to provide answers.

The day after the PS4 launch, *Develop* spoke to Denny in person, pressing him on the indie issue.

"At PlayStation we want the broadest content we can possibly have, so, of course, we want the best big triple-A games, and the biggest genres out there. But we also want other content as well," said Denny. "We want broader content and interesting content, and often that comes from smaller indie communities. We've always been open to indies."

That should come as some encouragement for studios keen to harness the power of the PS4, many of whom have already set their hopes high, as typified by comments provided to *Develop* by Paul Taylor, Joint MD at studio Mode 7.

"PS4 looks like a much more practical option for indie devs than past Sony consoles," he said. "I really appreciate what they've done in terms of its architecture. Also, there are loads of ways for players to share content, which helps out teams with smaller marketing budgets. All round, it looks like a good thing. I hope Sony will continue their proactive and supportive dealings with the indie community in the future."

Similarly, James Marsden, MD of FuturLab is optimistic about the future of indies' relationship with PlayStation 4.

"Of course, they need their triple-A showcases, but Sony are doing a great job supporting indie developers, particularly on PS Vita," he said. "The message that indie is important for Sony on PS4 took center stage with Jonathan Blow, so we're sold, and hope to get our hands on a PS4 development kit as soon as possible."

"The PS4 looks extremely promising. Sony's new direction definitely appears to be focused on ease of development. I'm most excited about the possibilities for independent development."

Wes McDermott
3D artist, The 3D Ninja

"With its incredibly bespoke architecture, the PS3 didn't make itself an easy platform. It's taken pretty much the generation for many studios to get the best from it. PS4 seems more workable straight away."

Clive Moody
Senior Exec Producer, Codemasters

"I do think there will be a much greater mix of types of games on the PS4, which will allow more experimentation, innovation and business models."

Simon Gardner
CEO, Climax

"I feel that part of the success of the PS4 – a large part – will be how it embraces the indie development scene, and how reciprocally the indie developers respond to it."

Mark Phillips
Indie Developer

PS4'S SPECIFICATIONS IN FULL

Main Processor: Single-chip custom processor
CPU: x86-64 AMD 'Jaguar', 8 cores
GPU: 1.84 TFLOPS, AMD next-generation Radeon based graphics engine
Memory: GDDR5 8GB
Hard Disk Drive: Built-in
Optical Drive (read only): BD 6xCAV, DVD 8xCAV

Inputs and outputs:
I/O Super-Speed USB (USB 3.0)
Communication Ethernet (10BASE-T, 100BASE-TX, 1000BASE-T), IEEE 802.11 b/g/n
Bluetooth 2.1 (EDR)
AV output HDMI
Analog-AV out
Digital Output (optical)

Havok's David Coghlan, FuturLabs' James Marsden, and Blitz's John Nash

▶ hard on their projects, I think we will see good things from the start. Sure, in two years engineers will figure out how to do a lot more. But these machines are easier to build on than before, so we should be able to reach their potential quicker."

Guillemot later added that he believes PS4 will enable more creative games design.

"They have so many features that they can play with," he said. "It's easier to be a creative person with new consoles, because after four years of people using all the capacity, it's harder to be innovative. With PS4, we will see new ideas and new ways to approach gamers. And that will excite consumers and excite creators."

THE WAIT IS OVER

Others chose to deliver a more mixed opinion of the PlayStation 4, including Daniel Kaplan, business developer at *Minecraft* creator Mojang Specifications.

"I really didn't have a clue on what to expect other than more of the same, but a fine tuned experience," Kaplan told *Develop*, before reiterating the sentiment that the PS4 corrects several of the current generation's failings. "Sony has fixed the issues with waiting time which in my opinion is quite a disaster on consoles today; waiting on updates, having to update before starting a game, being unable to download at the same time you are playing, etcetera."

Kaplan also chose to criticise the DualShock 4 as being crowded in terms of inputs and lacking in elegance, but still had much good to say about the PS4.

"I'm really looking forward to the recording features," he said, referring to the console's focus on social elements and sharing of gameplay experiences. "Video recording is something that has been huge for *Minecraft* on YouTube, and I hope that it will be a great success for other developers too. I'm still uncertain about the cloud gaming features, but if they can pull it off it will be great.

Long-standing UK outfit Blitz Games Studios, itself a confirmed PS4 developer and middleware provider, clearly feels utterly optimistic about the PS4, mirroring the perspective of numerous games companies *Develop* spoke with (*see previous page's panel 'PS4: The industry reacts'*).

"Sony's PS4 platform, and their continued commitment to supporting developers and fostering innovation, means that the space of possibility for new game experiences isn't just mere conjecture," insisted Blitz studio design director John Nash, speaking with *Develop*. "For us the real excitement will begin when the second, third and fourth wave of titles hit, hopefully taking full advantage of the unique features of the Sony PS4."

TOOLING UP THE PS4

Other middleware providers working to support the new Sony console shared Blitz's enthusiasm with tools giant Havok giving a passing nod to the current generation's demands on developers.

"It's a great honour to be in on the ground floor of a powerful new platform like PlayStation 4," Havok MD David Coghlan told *Develop*. "Expanding our tools and middleware to support the new system will mean developers can focus less on reinventing the wheel and more on crafting truly amazing next-gen gaming experiences with ambitious new ideas and captivating new worlds to explore."

And if the era of 'reinventing the wheel is over,' then engine providers like Epic, which supports indies and triple-A outfits alike with it's various offerings, should see the full breadth of its industry customers able to realistically consider making games for the PS4.

"We are thrilled to build onto our long-established success with PlayStation," said Tim Sweeney, CEO of Epic Games, in a press statement. "Unreal Engine 4 is expertly designed for the next generation of games development and the outstanding power of PlayStation 4. The demonstration offers a preview of what developers can accomplish using our tools to create games for PlayStation 4."

If nothing else, Sony appears to have by and large convinced the games development community, with many already boasting experience with the PS4 reporting a positive experience, unlike that seen with the PS3. The platform holder must now deliver on its promise, and questions remain about accessibility for indies (*see panel 'What about us?'*), but, all in all, it seems developers are eager and optimistic.

To the dismay of some consumers, Sony did decline to show the form factor of the PS4 – presumably with a view to release more information at a later point – and the exact release date and retail price currently remain a mystery. All that is known is that the machine will be available to the public in 'at least' one territory by Christmas this year.

Late in February, having previously named 53 European studios as confirmed PS4 developers, Sony has now revised the list to 30 companies. Studios no longer named include Mojang and *Angry Birds'* outfit Rovio.

There were additions though, including *Hitman's* IO Interactive, *DmC* studio Ninja Theory, *DayZ* developer Bohemia, 2K Games, Sumo Digital and *Witcher 3* creators CD Projekt. No changes were made to the lists of US or Japanese developers.

Regardless, optimism abounds, summed up neatly by Caspar Field, co-founder and CEO of indie Wish Studios.

"PS4 was intelligently pitched as developer-friendly, internet-friendly, powerful, social, and accessible – all of those were the right buttons to press," he told *Develop*. "It was smart to save the case design and price for later in the year; it's the services, positioning and controller that matter most. Sony has played its cards smartly." ■

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FESTIVAL OF GAMES
April 24th to 25th
Amsterdam, The Netherlands
www.festivalofgames.nl

Held in Europe's liberal city, this festival is part conference, expo and networking event, and aims to give new talent routes into the industry.

There will be more than 25 sessions from members of the Dutch games industry, alongside the event's usual show floor demos and meetings.

Companies already scheduled to attend include Guerrilla Games, Matmi, GameFounders and Distimo.

Look out for more information on *Develop*'s website.

MARCH 2013

SXSW INTERACTIVE 2013
March 8th to 12th
Austin, USA
www.sxsw.com/interactive

MCM BIRMINGHAM COMIC CON 2013
March 16th to 17th
Birmingham, UK
www.mcmcomiccon.com

INSOMNIA GAMING FESTIVAL 2013
March 22nd to 25th
Telford, UK
iseries.multiplay.co.uk

GAME CONNECTION AMERICA 2013
March 25th to 27th
San Francisco, USA
www.game-connection.com

GDC 2013
March 25th to 29th
San Francisco, USA
www.gdconf.com

APRIL 2013

THE GADGET SHOW LIVE 2013
April 3rd to 7th
Birmingham, UK
www.gadgetshowlive.net

MCV INDUSTRY EXCELLENCE AWARDS 2013
April 18th
London, UK
www.mcvawards.com

EAST COAST GAME CONFERENCE 2013
April 24th to 25th
Raleigh, USA
www.ecgconf.com

FESTIVAL OF GAMES 2013
April 24th to 25th
Amsterdam, The Netherlands
www.festivalofgames.nl

MAY 2013

DEVELOP QUIZ
May 15th
London, UK
www.develop-online.net/events

NORDIC GAME CONFERENCE 2013
May 22nd to 24th
Malmö, Sweden
www.nordicgame.com

GAME CONNECTION ASIA 2013
May 28th to 29th
Shanghai, China
www.game-connection.com

JUNE 2013

E3 EXPO 2013
June 11th to 13th
Los Angeles, USA
www.e3expo.com

THE MONTH AHEAD

A look at what March has in store for the industry and beyond

MARCH 8TH
Castlevania: LoS – MoF.
This 3DS follow-up to 2010's *Lords of Shadow* is the story of Gabriel's descendants.

MARCH 8TH
Side Effects.
Steven Soderbergh's swan song stars Rooney Mara as a young woman battling depression.

MARCH 8TH
SimCity.
The city builder that put Maxis on the map is reborn, with curving roads to boot.

MARCH 8TH
International Women's Day.
A day honouring females everywhere, and one for social recognition of women's rights.

MARCH 8TH
SXSW Interactive.
Panels, workshops, meet-ups and more can be found at this fast-growing portion of SXSW.

MARCH 15TH
Saint Patrick's Day.
(Re)discover the Irish spirit in song, dance or drink in memory of the nation's saint.

MARCH 15TH
World Sleep Day.
Catch some shuteye on a day about the importance of the state no one can do without.

MARCH 22ND
Gears of War: Judgment.
The fourth *Gears of War* takes us back to the the immediate aftermath of Emergence Day.

MARCH 25TH
Game Connection America.
Happening alongside GDC, this conference is aimed at forming business partnerships.

MARCH 25TH
GDC 2013.
Next-gen is on the menu at the world's biggest developer conference with 400+ sessions.

MARCH 26TH
BioShock Infinite.
Join Elizabeth on a city of the skies in Irrational's eagerly awaited first-person adventure.

MARCH 31ST
Easter Sunday.
Commemorate rebirth as spring begins. Will this be the start of something new for you?

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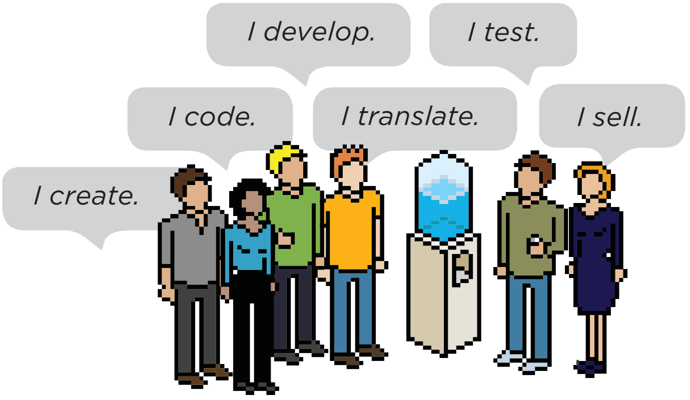
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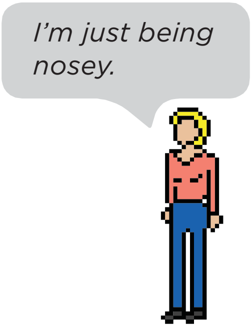
I code.
I translate.
I sell.
I create.


I'm just being nosey.

It takes all sorts to make a game.

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//COMMENT: BUSINESS

Have gamers really unsubscribed?

Nick Gibson ponders the future of online games subscription models

More games, such as World of Warcraft, transitioning to tiered subscriptions, show the model is far from dead, says Nick Gibson

RIP THE VENERABLE subscription model, or so countless articles, editorials and speeches would have you believe. It's said that the seemingly irrepressible freemium and microtransaction models have killed the subscription model. This month I want to explore whether gamers have really unsubscribed and find out how the subscription model has fared recently.

Firstly, let's get some misunderstandings out of the way. The subscription model and freemium/free-to-play are not mutually exclusive; freemium subscription games are not only possible, but actually common and popular. Secondly, the combination of subscriptions and microtransactions is also commonplace, and is actually becoming the standard model for high-end MMOs.

A NUMBERS GAME

Next let's look at the data. GIC has been tracking the MMO and virtual world market at individual title level for over a decade now and our database currently comprises nearly 700 PC and console download and browser titles launched, and still operational, in the West. Thirty-five per cent of these titles employ a subscription model or some variation of it. Seventy-seven per cent of these subscription games are freemium, offering an optional premium service typically charged monthly. Just eight per cent of all titles have mandatory subscriptions, a subscription model subset that undoubtedly is heading for extinction in the face of such vast and growing levels of – typically, free-to-play – competition. Yes, *WoW* still uses this model, but has already added a free tier and I would be truly shocked if Blizzard maintained a mandatory subscription model for *Project Titan*, its next MMO.

> ***"The subscription model has not died, it has simply been reborn for the free-to-play era, working alongside freemium microtransactions."***

A deeper, longer look at the subscription game market reveals that publishers have been doing some really interesting things with the model. The introduction of tradable subscriptions, which provide players with a method of earning their monthly membership, has been adopted by several high-profile MMOs, such as *Eve Online* and *EverQuest II*. Dozens of titles with hybrid subscription/microtransaction models have effectively married the two by using subscriptions to provide monthly virtual currency stipends, as well as other benefits to members. Subscriptions are often cited as producing lower ARPPUs than microtransactions, but some have overcome this by offering tiered membership levels – with some offering subscription prices up to $50 per month, while others allow multiple subscription accounts. The result is players spending tens and even hundreds of dollars per month on subscriptions alone – 'subscription whales' if you will.

The future of subscriptions is undoubtedly free-to-play, but, far from being dead, in today's market it is definitely thriving. The model remains the standard for kids' virtual worlds, like *Moshi Monsters*, and is key to the ongoing success of many casual MMOs such as *RuneScape*. Its adoption within big budget download MMOs is also gathering pace.

THE BRASS BAND

I recently got to talk to senior brass at both Turbine and SOE, who were equally effusive in their praise for the freemium subscription model. It was widely reported that the adoption of a freemium model for Turbine's *LOTRO* and *DDO* MMOs resulted in a sharp uptick in revenues. What is less known is that both games' subscriber numbers actually increased following the transition; the result of increased player numbers and the strength of their subscription propositions. Turbine is not alone. According to SOE, *Everquest II*'s transition to free also resulted in its subscription level actually increasing.

In fact, for both SOE and Turbine, the subscription model is still a mainstay of their MMO businesses. By positioning it as a cost-saving value proposition for core players, SOE has been able to attract a substantial subscriber base for *Planetside 2*, helping bolster its total monthly paying player conversion rates to a very respectable ten per cent.

So the pronouncements of the death of subscriptions is simply wrong. The subscription model has not died, it has simply been reborn for the free-to-play era, working alongside, but not being replaced by, freemium microtransactions. For online games companies that are considering what model to adopt for their persistent world game, an optional subscription could be part, if not the core, of their model. It's an excellent way to garner a more predictable and regular revenue stream from your more devoted players, while simultaneously providing them with a range of game benefits that can be perceived as fantastic value deals. This undead model could yet make you a lot of money.

Nick Gibson is a director at Games Investor Consulting, providing research, strategy consulting and corporate finance services to the games, media and finance industries.
www.gamesinvestor.com

//COMMENT: STUDIO MANAGEMENT

A future Relic

Tim Heaton provides a fascinating insight into Sega's bid for Relic Entertainment

THERE ARE MANY words I've used to describe Sega's decision-making process in my time at Creative Assembly. Several of them are positive. However, until recently, fast, decisive and self-assured wouldn't have been on that list. That all changed on January 23rd when Sega bid to buy THQ's Relic Entertainment.

A few days beforehand, I'd been invited, together with colleagues from Sega Europe, America and Japan, to travel to Vancouver and perform 'due diligence' on the studio. This brought back fond memories for me – back in the glory years (I'm being gently ironic) I used to work for EA Partners, the business unit within EA, dealing with external developers. We spent a lot of time visiting studios, mainly in Europe, but also in the US and Japan. It was a fun time. EA's pockets were deep and with an EA calling card you usually got treated with a great amount of eagerness and hospitality.

SOME FOR LUCK

This generosity was often mixed with a certain amount of salt thrown over the shoulder, cloves of garlic and a wooden stake ready for action too, just in case the evil spirits from a big, scary publisher got too much. We always said we were the friendly face of EA, although if you've seen our faces you'd have to wonder.

It was a great privilege to visit nearly all the key independent studios in Europe. As a studio manager, life can be quite isolating – your competitors are not typically going to throw open their doors, and although it seems better now than ever before, really interesting information is rarely disclosed publicly. Calling in on developers, and doing due diligence opened my eyes to the different characters of development teams. Sure, we'd look into tech, tools and pipelines. We'd tick boxes to make sure they had strong IT practice, a good support structure, bonus incentives, etcetera. In the early days, every team thought they had some bit of tech that would be their silver bullet; a bespoke project management system, a sexy rendering technique, an interesting tool to do something. But, of course, what really mattered was the character of the studio. What were their key tenets, their driving forces? Identifying that was important, and it wasn't actually that hard. After all, if they're your driving forces, they should be pretty obvious. It comes out in everything you do. We just looked at what the key staff were interested in discussing, tried to understand what they felt was important, and how they organised their teams to deliver that.

OPPORTUNITY KNOCKS

So, when we visited Relic it quickly transpired that there was a real opportunity. It shouldn't have been a surprise – within Creative Assembly, *Company of Heroes* and *Dawn of War* are highly respected. However, it was great to realise we had a lot in common – the core aspects that generate a studio's character. Some clues included how they discussed their games, their staff retention, despite fairly turbulent times, their pragmatic attitude and attention to detail, along with plenty of other pointers. They're proud to be part of Relic, like we're proud to be part of CA.

Some have asked what on earth a company that makes arcade and *Sonic* games would want with a PC strategy developer. That's simply answered by looking at Sports Interactive and Creative Assembly – PC strategy games at their core, they're very successful for Sega, and not only allow iterations on strong IP, but because of the nature of those games, they allow experimentation in new delivery methods and new markets.

Before the flight back, in a hotel meeting room like a post-nuclear war bunker, six of us put a financial plan together and communicated back to Japan. Within days, the board had approved a bid, Sega representatives went to Delaware to bid, and we were all really happy with the outcome. It made me feel happy that Sega were back out showing confidence and spending money, and that senior management can make this happen in a very motivated way. And it makes me happy that Creative Assembly and Sports Interactive can get to know the other developer in the list of the top three best strategy games developers in the world.

Company of Heroes 2 maker Relic was a perfect fit for Sega, says Heaton, who visited the studio before its acquisition

Tim Heaton is studio director at The Creative Assembly, the UK-founded studio behind the acclaimed *Total War* series of PC games, as well as numerous other works including original and licensed products.
www.creative-assembly.co.uk

//EXTRA CONTENT ONLINE

"Take a look at a chair in *Dishonored*. The need to make everything bespoke has led to an insane depth of art direction, unheard of in mediums based on capturing the real world."

Mike Bithell, Indie Developer

"A rising number of these low-cost machines that take advantage of platforms such as Android are providing new outlets for developers, as well as fresh revenue streams."

Richard Wilson, Tiga

"I tricked you – don't you see? Me telling you all of the time you don't need a consultant, left this big consultant-shaped hole for a besuited middle aged man with a penchant for conditionally formatted Excel docs."

Will Luton, Consultant

To see all of our reader blogs visit: www.develop-online.net | Email craig.chapple@intentmedia.co.uk to contribute your own blog

GDC 2013: The Essential Guide

Bewildered by the sheer scope of the Game Developers Conference? Here's all the key facts on a single page

TWENTY-SIX YEARS ago, GDC saw 25 developers gather in the living room of a famed developer. Today, it gathers 22,500 industry insiders in San Francisco's Moscone Centre, and stands as the biggest global games development show.

With over 400 lectures, panels, tutorials and round-table discussions, eight themed summits, a sprawling expo hall and countless spin-off events, parties and other gatherings, it can be a confusing week, especially when you're late for a meeting and don't know your Moscone North from your Moscone South.

That's why we've crafted the compact single-page guide, with all the key info you could need.

For all the latest news and opinion direct from GDC, check out **www.develop-online.net**.

And get in touch if you'd like to meet at the show.

KEY FACTS

- **Dates:** March 25th to March 29th
- **Opening hours:** 9am to 6pm approx
- **Venue:** Moscone Center, San Francisco, CA **www.gdconf.com**

- **Registration opens:** March 24th at 5pm
- **Registration hotlines:**
  Tel: 415 947 6926
  Fax for registration changes: 866 535 8997

- **GDC Expo:** March 27th to 29th
- **Summits and tutorials:** March 25th to 26th
- **Main conference:** March 27th to 29th

THE SUMMITS

The Summits offer two days of lectures, panels and postmortems to foster community-building within specific sectors of the games industry. Take your pick while spaces remain:

- AI Summit
- Free to Play Design & Business Summit
- Game Narrative Summit
- GDC Education Summit
- Independent Games Summit
- Localization Summit (Tuesday only)
- QA Summit (Monday only)
- Smartphone & Tablet Games Summit

SESSIONS: EDITORS' PICK

Too many sessions, not enough time? We've picked a selection of favourites from the GDC 2013 schedule to get you started when you hit the show floor

Advanced Visual Effects with DirectX 11
An all star line-up including experts from Crytek, Crystal Dynamic, AMD and Nvidia offer invaluable advice.
March 25th, 10am – 6pm, Room 3001, West Hall
Programming Track

Classic Game Postmortem: Myst
Robyn Miller of Zoo Break Gun Club offers insight into the creation of one of the most distinct games ever made.
March 27th, 3:30pm – 4:30pm, Room 2014, West Hall
Design Track

Designing Humour in Borderlands 2
Gearbox Software's Anthony Burch gets serious about making a game funny.
March 28th, 5:30pm – 5:55pm, Room 134, North Hall
Design Track

Double Fine's Audio Production Survival Guide
Brian Min of Double Fine offers what promises to be an essential guide to making your game sound great.
March 29th, 2:30pm – 3:30pm, Room 3000, West Hall
Audio and Production Tracks

How to Build a Better Apocalypse
Dear Esther co-creator and thechineseroom co-founder Dan Pinchbeck provides a wealth of device on where to start with end of the world games design.
March 29th, 11:30am – 12:30pm, Room 304, South Hall
Design Track

Kickstarter Lessons for Indie Game Developers
A range of pros, including lead staff from Revolution Software, Double Fine and Die Gute Fabrik, share lessons learned about the crowdfunding platform.
March 27th, 11am – 12pm, Room 2005, West Hall
Business, Marketing & Management Track

Nintendo Wii U Application Development with HTML and JavaScript
A trio of Nintendo staff from across the globe share tips on embracing development for the Wii U, and specifically why HTML and JavaScript open up the console to new creators.
March 27th, 2pm – 3pm, Room 132, North Hall
Programming Track

Relighting Forge in Halo 4: Just-In-Time Lighting of User Generated Content
343 Industries' software development engineer Adam Gold shares the technical secrets of one of last year's most graphically ambitious releases.
March 28th, 5:30pm – 6:30pm, Room 304, South Hall
Programming and Visual Arts Track

Sex in Video Games
Despite remarkable technological advances, when it comes to coital relations games are still an immature medium. BioWare's David Gaider explores the issue.
March 28th, 2:30pm – 3:30pm, Room 2005, West Hall
Design Track

The Unfinished Swan: From Student Prototype to Commercial Game
Giant Sparrow's Ian Dallas will discuss what went right and wrong with the studio's highly regarded first-person painting game.
March 25th, 1:45pm – 2:10pm, Room 3022, West Hall
GDC Education Summit

We Are the Space Invaders (Presented by NASA)
Two of the space agency's Jet Propulsion Laboratories staff touch down at GDC to talk industry crossover and potential partnerships.
March 27th, 5pm – 6pm, Room 2014, West Hall
Design Track

SELF REGISTRATION
SELF REGISTRATION

THE EXPO

Along with the sessions that make up the core conference, attending the expo is key to any GDC visit.

The expo gathers hundreds of game companies booths and thousands of professionals in the South Hall, and is a great place for networking, ad hoc meetings and picking up those all-important GDC party invites.

Expo hours
Wednesday, March 27th
10:00am – 6:00pm

Thursday, March 28th
10:00am – 6:00pm

Friday, March 29th
10:00am – 3:00pm

Close to the Expo lies the GDC Business Centre, a key resource for networking while at the show, found in the North Hall.

Business Centre hours
Wednesday, March 27th
9:00am – 6:00pm

Thursday, March 28th
9:00am – 6:00pm

Friday, March 29th
9:00am – 3:00pm

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Indie publishing on the record p36

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Feeling lucky?

The gambling sector has brought giants like Konami a valuable revenue stream. But is there really an opportunity for your studio in real money gaming? Develop investigates, p18

Making your studio start-up last p22

Region Focus: Canada p26

A safe bet?

Could the business opportunity in the gambling sector offer games developers untold fortune or a creative dead end? **Will Freeman** investigates

So successful in the gambling sector is Konami, it even produces physical slot machines (main image). Odobo's Ashley Lang (top), and Big Fish's Carey DiJulio (above)

THE RELATIONSHIP BETWEEN the video games industry and gambling sector has long been fraught with tension.

Since arcade cabinets and slot machines first began jostling for public space in the 1970s, games developers have been understandably cautious about attention from the world of 'real money gaming'.

And while it's easy to draw parallels between the industries – both center on mathematically constructed gameplay, and to a lesser or greater extent each typically demands financial input from the consumer – defining what separates them in a meaningful way is less simple.

Ultimately, the distinction is a cultural one, and something abstract, framed by individual opinion. To many artistically motivated video games developers gambling is a cynical business, conceived to exploit the player, where creativity of games design languishes, itself a victim of the need to turn profits. They see gambling – quite possibly rightly – as an industry dominated by those that wear suits, where the need for underdressed female booth attendants at trade shows remains a standard.

To others, real money gaming is a place of iconic, even ancient games mechanics, where systems like poker's are the subject of much academic study and cultural impact.

Whatever your opinion, one thing is certain. A new wave of traditional video games developers and service companies are penetrating the gambling sector, and they are being greeted with open arms.

> ***"The core of any game, as much as the art of it, is the maths of it. And that's not so different from real money gaming."***
>
> Ya-Bing Chu, Betable

The assumption is that real games developers don't do gambling, but could it be that there's an opportunity not just to make money, but to establish a new creative frontier for studios that warm to a challenge?

YOU AND WHO'S KONAMI?

The first wave of games companies to embrace gambling were the giants of the once glorious arcade industry – and currently outfits like Konami boast divisions devoted to crafting slot machine titles.

But today's generation of studios heading to the other side come from somewhere else; namely the creators of the once moneyless casino games seen most commonly on social networks. Gambling laws are famously complex and vary from nation to nation, but in countries like the UK new deals have let real money gaming take place on communities like Facebook. That means that those already building games for social networks now have a chance to embrace an industry that sees per-player values come in an average of 15 times higher than the numbers seen in the casual and social space.

Similarly, as physical casino owners increasingly replicate their business in digital form on websites, browser developers are seeing an increased demand for their skills and methods from the gambling business.

As a result, a range of services to support developers now exist, taking creations – via intricate APIs – to gambling operators across the globe and handling the gameplay, bet resolution, licences, regulation, fraud protection and transactions across their servers.

YOU BET

Ya-Bing Chu, former Zynga vice president, and one-time member of the early Xbox Live team, serves as chief product officer of one of those platforms, Betable.

"I know where some games developers are coming from with how they perceive the

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A NUMBERS GAME

PUTTING A VALUE on the international gambling and real money gaming sectors is a tough job, but some suggest the industry is expected to surpass £30 billion in worth by 2015. It's a figure that dwarfs the still huge annual revenues of social games.

Average player values in regulated gambling are believed to be over 15 times higher than those enjoyed by social and casual gaming companies – with some suggesting that figure is twice as high.

Certainly then, there are consumers out there eager to win money through browser games portals, social networks and on devices like mobiles.

And research commissioned by Odobo – which provides games developers with a GDK for seeing their games distributed by gambling operators – and carried out by data consultancy H2 Gambling Capital, suggests that software and content providers can expect a ten-to-20 per cent share of net revenues. The same research also points to a lack of fresh content in a space where new games typically mean increased player retention.

By those figures, the financial opportunity seems vast, even for developers making games for licensed operators that handle gambling's famously convoluted laws. For those willing to add 'real money gaming development' to their company CV, from a purely statistical perspective it appears making games for gamblers makes substantial business sense. How real money gaming matches a studio's cultural position, however, is a matter for individual outfits to decide upon.

gambling and real money gaming space," admits Chu, recoginsing that to some developers there exists a stigma associated with working in the real money gaming industry, simply because of its explicit focus on money.

"The traditional console-based games business saw studios starting to compete on the polish and finish of triple-A games a long time ago. So now you see these cinematics and all those things, and arguably those are very important to story-based games, and they are very entertaining, but ultimately most games still come down to mechanics of risk and reward; that's what makes it a game – it's all about chance and results," offers Chu.

"The core of any game, as much as the art of it, is the mathematics of it – the spreadsheets behind the games. That's where the game designers are thinking, and that's not so different from real money gaming."

And, argues Chu, within much of the video games industry real money remains core to 'success', be it through in-app purchases or full payment upfront. The players, he highlights, still invest their hard-earned cash; it is just the kind of reward that distinguishes real money gaming.

While video games players see entertainment, achievements and high score rankings as their reward for spending money on a video game, gamblers have a more clear cut compensation in mind. Quite simply, they want more money.

"In that context, it's not selling out for developers to move into this space. It's just a different business model to satisfy different player aspirations," offers Chu.

> ***"It's definitely true that players are now investing money for both entertainment and for a real money gaming experience."***
>
> Carey DiJulio, Big Fish

One developer already working with Betable is social giant Big Fish, which in March last year acquired mobile social game developer Self Aware Games and its parent company, Social Concepts. Since then Big Fish has taken Self Aware's mobile moneyless gambling game *Card Ace: Casino*, rebranded it as *Big Fish Casino*, introduced the option for real money gaming and hooked the game into the Betable platform.

The prospect with projects of that ilk, says Big Fish's GM of *Big Fish Casino* Carey DiJulio, is that of creating games that see the player invest money both for entertainment and winning real money.

"It's definitely true that players are now investing money for entertainment and for a real money gaming experience," she says. "You see people spend long periods of time in our games, enjoying the playing experience as much as the possible financial outcome."

If that really is the case, then developers put off making gambling games by the idea that they will lose their claim to being creators of creatively worthy titles may have to reconsider.

BRIDGING THE GAP

Another platform conceived to link developers with gambling operators is Odobo, which centers around HTML5, a distinct GDK and a marketplace designed to take the pain out of distributing real money gaming titles.

And Odobo's CEO and founder Ashley Lang is equally convinced that making gambling games and titles of creative worth can be the same act. His logic is that the gambling space has long been dominated by homogenous titles, meaning the doors are wide open for innovative games design.

"This real money gaming industry, because it has been a bit of a black box for the games development community, has had to put up with a fairly narrow channel of content production from a very small group of studios," says Lang.

"There's a need for creativity and entertaining consumers, and to compete with other digital entertainment forms, so its necessary for the [gambling] industry to streamline the processes and for more developers to participate without having to become operators themselves. That means its now a time of huge opportunity."

And for games developers who like a games design challenge, suggests Lang, the process of making something creatively distinct that is exercised on top of a mathematical model that is commercially viable could prove very interesting.

Developers may also be concerned that the gambling business is one that has to address issues like addiction and irresponsible play, but on that matter Lang is reassuringly frank.

"There do have to be boundaries for developers," says Lang. "With the opportunity comes the reality that it is the regulated gaming industry, and we need to protect the players and ensure responsible gaming and everything like that – that has to come first. But those boundaries leave a lot of room for creativity and commercial opportunity."

Boundaries certainly work to foster creativity over on the far side of the games development sector, where indies tackle game jams that are largely defined by working within restrictions of time and brief, so Lang's point is not without parallels.

A FLASH IN THE PAN?

But as the games industry increasingly becomes fascinated with small studios and independents, and unusual and commercially unconcerned works increasingly stand as champions of the development business' moral worth and creative potential, there will always be companies that refuse to

▶

Top-to-bottom: Rabcat's Thomas Schleischitz, consultant Will Luton, developer Scott Jon Siegel, and Betable's Ya-Bing Chu

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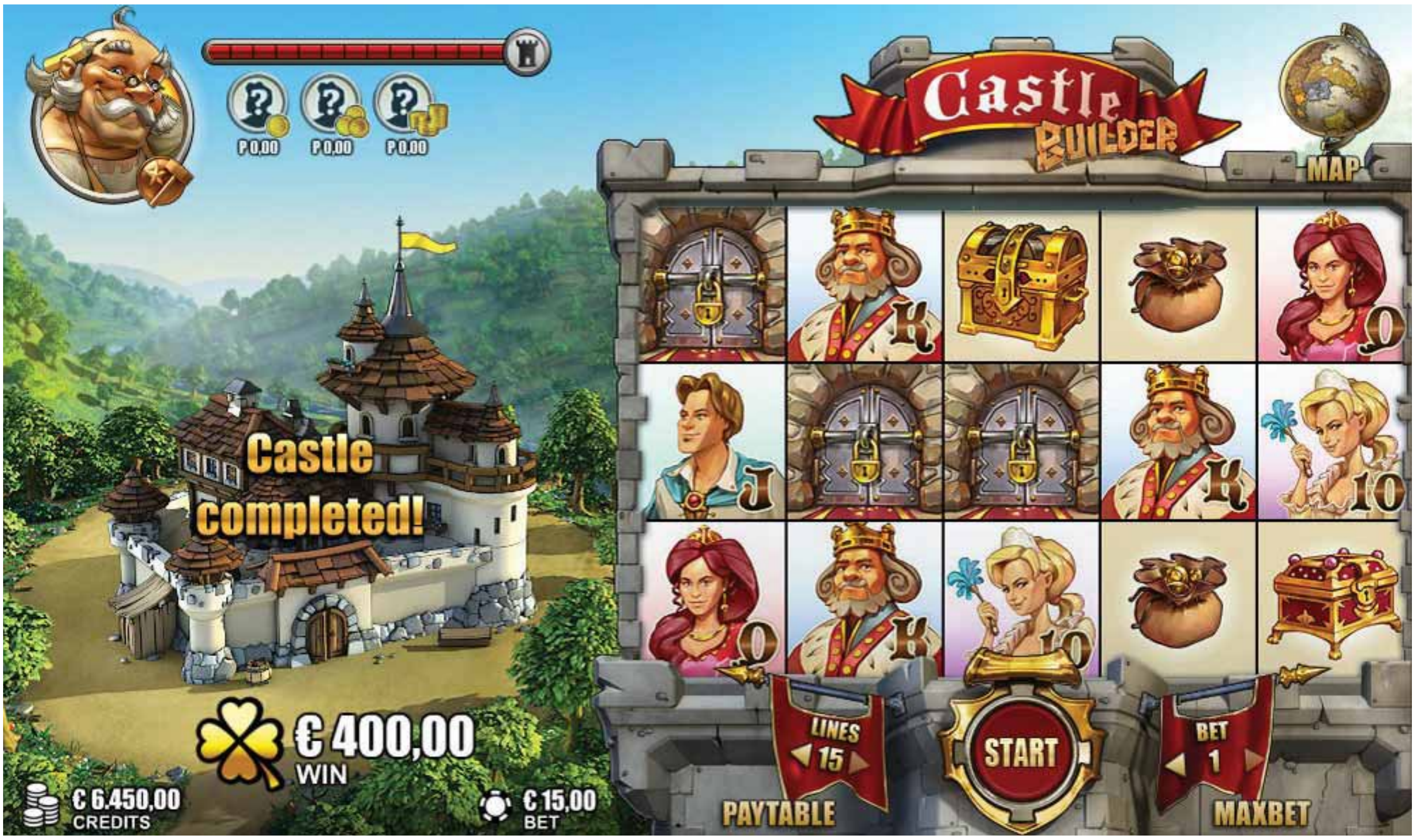

Rabcat's real money gaming title Castle Builder (above), which mixes slot machine mechanics with simple civilisation building gameplay

▶ accept gambling as something games developers should consider.

"My gut instinct is that it's a flash in the pan," says consultant and former games developer Will Luton of the trend that sees studios embracing gambling. "Maybe that's because I don't want the crossover between gaming and real money gambling to happen on a personal moral basis. But also I think existing, long-established gambling companies, casinos, live betting and bingo, have the edge. They know the markets, they have the tech and the set up – they've been doing it for years."

Luton does predict that we will see more of those established outfits snap up social and mobile developers as they look for new content with which to charm gamblers, but he is clearly less than sure of how many studios are eager to embrace real money gaming.

And he isn't alone in questioning the reality of games makers of every kind rushing to place a bet on gambling.

"In theory, I love the idea of games developers applying their skills to the problem of designing games for gambling," explains games developer Scott Jon Siegel. "But I don't think that's what's actually happening right now.

"It's not about games designers solving interesting problems in the gambling space – which I'm all for. It's more about games developers capitalising on impending online gambling legalisation with an inevitable deluge of poker, blackjack and slot machine apps. That's what I'm dreading. More 'flavour of the week' trends and a lot of samey products."

Regardless, some are clearly making the move, and as *Develop* met with Odobo's Lang at the UK's ICE gambling trade show, the variety of big name studios of every kind making enquiries at the company's stall was clear for all to see.

CASTLE BUILDERS

If this trend is a reality, then 'opportunity' is its buzzword. And that opportunity does not stop at developers.

Rabcat started out as a video games art outsourcer in 2001, and continues to offer that service. But in 2003, the largest Austrian gambling platform, Win2Day, approached Rabcat about providing assets.

Ultimately, as that deal progressed Rabcat started making complete games for Win2Day, handling the entire development process, changing the company's business model to the point that it formed an entire new wing, Rabcat Gambling.

> ***"I love the idea of games developers applying their skills to the problem of designing games for gambling. But I don't think that's happening now."***
>
> Scott Jon Siegel, Developer

For Rabcat, open mindedness to real money gaming has seen the company expand and assume a full developer status.

And yet it continues to outsource art for the video games industry; a point which Rabcat CEO and founder Thomas Schleischitz says demonstrates why work in video games makes for the perfect foundation for success with gambling work.

"Working in the video games space is definitely a good foundation for working in the gambling space," states Schleischitz. "If I look back to 2004, we had a huge advantage over the existing gambling companies in what we could offer. We brought fresh ideas and a completely different understanding of what quality means. Being experienced in video games is a hugely important door opener, and our continuing to do that work for games means we continue to exceed meeting the expectation of quality."

As a result Rabcat has made *Castle Builder*, a real money gaming title that, while built on a slot machine base, offers players a simple civilisation maintenance mechanic. Like many of the first wave of gambling games to move away from the long-established models, it is still clearly rooted in the slot gaming arena. But as a starting point for what is possible, it has become something of a poster child for what developers may be able to do to refresh the gambling business.

Moving the medium beyond that is a challenge, says DiJulio, but tackling that challenge early could thrust developers as yet unfamiliar with the spotlight to the forefront of the industries' conscience.

"The first developer that comes out with a non-traditional casino game that works as a real money game is going to learn some really interesting lessons about how that translates," she says. "Being the first to do that will be a very big deal."

Many will remain sceptical of regulated gambling as an opportunity for developers and steer well clear of the entire industry, while others will happily embrace a business opportunity of such momentous size.

And just maybe a few will seize on what they see as an opportunity to shake up and redefine one of gaming's most long-standing forms, armed with creativity, a desire to innovate and experience. And perhaps a few will even realign the suit-to-utility-kilt ratio at future gambling trade shows. ■

Start as you mean to go on

Opening a studio is the easy part. Keeping it thriving in its first few months is where it gets tough. Remode's **Martin Darby**, who runs the company he founded five years ago, offers advice on making your start-up last

Remode's youthful team (above) have, after five years, finally had a chance to accelerate away from being in start-up mode.

IT IS COMMONLY claimed that new companies go bust within the first three years. After the journey I have taken, it's easy to see why. Remode, the studio I started, has now been in business for five years.

It's only at the end of the five years that we have gone profitable with a 12.5 per cent net margin and a team of 18. We are able to capitalise on the momentum in online and mobile games. While some might say that this is lucky, the reality is that it has involved a hell of a lot of blood, sweat and tears.

This very personal, as well as a business victory is also a reminder of the fact that we are not a start-up anymore, and that has given me a chance to reflect on those critical first three years.

Starting a company and keeping it going onwards and upwards is hard. Really, really, hard. I'm a big believer in the fact that it's easy to sit there and talk about the way things should be, but actually getting out there and proving it is a million times more difficult.

This general mantra is nothing new. The question remain; why is setting up your own studio so tough? I've been working up a theory as to why all this is so difficult. I think a large facet of it is that it's full of contradictions that defy natural human bias towards black and white thinking.

For most start-ups – the phenomenal unpredicted successes like Mojang and *Minecraft* withstanding – it is difficult to weather the range of problems and setbacks that come with any growing business. For four of the five years my head has been spinning, but now I feel stronger for it.

> ***"Whatever you do don't simply sit there and make a game. Whatever you do, don't try and ride the tech gravy train if you don't truly understand it."***

These contradictions are like rocks just under or above the ocean surface, and the start-up as a ship on a stormy sea. If you navigate around them you survive, but it is very easy to be wrecked by obstacles you don't realise were there until it is too late.

CONTRADICTION 1: YOU CAN'T DO THE WORK, BUT YOU MUST DO THE WORK

One of the first things I was told in business is that you must have at least one person looking outwards at all times, forging networks, assessing what is going on in the market, building awareness and signing deals. This is extremely difficult when there are only a few of you and there are jobs to be done and products to be made.

What that means is that one person can often be covering both roles, which can add lots of hours, stress and unknowns.

The problems can get worse when this splits full time. If developers begin to disrespect sales as 'schmoozing' and 'not real work', and sales end up resenting developers as 'introverts who don't understand the world'. It sounds stupid, and truthfully it is, but this is the sort of thinking that a pressure cooker start-up environment – in which tangiable results are not yet evident – can create.

Whatever you do, don't simply sit there and make a game. Whatever you do, don't try and ride the tech gravy train if you don't truly understand it. It's a difficult balance.

CONTRADICTION 2: YOU NEED A FOCUSED OFFERING, BUT YOU MUST CAST A WIDE NET

I've read business textbooks and spoken to many people who all say the same thing: be specific or you won't send out the right message to the market.

As Remode has blossomed, its art team is developing a distinct style, as seen in their concept work (above)

In reality it is very difficult to know where to draw the line, and everyone would draw it in a slightly different place. What I found is that in the beginning you are best off doing whatever it takes to bring in revenues, and then move towards your goal.

Pivot, and the market should be the one sending you the message.

In the early years I worried about this balance constantly, and about whether or not we would be seen in the right light. In 2007 and 2008 it felt like journalists were on a constant mission to homogenise the industry. Experience now tells me that the start-up period is actually about figuring this out. From what I have seen, unless you experience an extraordinary take-off – which is not common – then, more often than not, history will forget the start-up phase. However this also means that if you are more than three years old and are still the same jack-of-all-trades you were in the beginning, then you probably have a problem.

CONTRADICTION 3: YOU MUST BE OBJECTIVE, BUT YOU MUST HAVE COMPLETE EMPATHY

It goes without saying that to endure life as head of a business you need to think as rationally as possible. That does not mean you are not human and you won't get frustrated like everyone else.

What it does mean is that you need to be able to draw conclusions based on supporting evidence, rather than forming an opinion and then looking for any evidence you can to support it; that's the way of dramatic soap opera-thinking.

It's a fine line and the better you are at it, the more emotionally disengaged you can appear. However, the irony is that you need to be more empathetic and in tune with your emotions than ever.

This is because a company is built on people and those at the coalface need to know you understand their challenges in order to improve process and management. This doesn't mean you cross certain lines, but it does mean that you need to be logical without being a robot. It's much harder than it sounds.

CONTRADICTION 4: IT IS NOT ABOUT THE PRODUCT, BUT IT IS ABOUT THE PRODUCT

Games businesses have a consistent problem created by the 'hit-driven' nature of entertainment. The company rarely takes off and makes huge profits until a hit has been created, but VCs and other equity investors are not interested in the product.

They see it as a given that you can make a good product and want to understand why the market needs this company, and how it can become a key player within it.

It can be a very difficult problem to overcome, leading to either a disagreement if negotiations go badly or a big elephant in the room if negotiations go OK.

There is no right or wrong answer here, as every company is different, but I would say that thinking about how you are diversifying risk is a key point.

Tadhg Kelly has written more about this at *whatgamesare.com*.

A SERIOUS BUSINESS

If you are serious about growing a start-up, then try to find a balance between these variables. Expect to have to become who you need to be to deal with it. If you get past the start-up phase, then the real work begins. ■

Martin Darby founded Remode in 2007, and has been integral to it's growth, and the creation of more than 30 online and mobile games. He is responsible for the creative vision and delivery of all projects, including client work and, recently, the studio's own IP. **www.remodestudios.com**

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Lessons from across the pond

For years, Canadian games studios have been reviled by UK businesses, thanks to generous tax breaks. But in response to intensive competition from the region, British games studios are now getting their own subsidies. *Develop* asked experts from this market what we can learn ahead of the introduction of UK games tax breaks

Top-to-bottom: John Jennings of Longtail, Maurice Patel of Autodesk, and HB Studios' Jeremy Wellard

THE DEVELOP TEAM has only ever once received hate mail. And it probably won't surprise you to hear that it was as a response to coverage of the issue of tax breaks.

Until last year, when the Coalition UK Government finally relented to years of lobbying to start a British tax credit, Canada was painted as the villainous nation draining away our talent.

With subsidies around production, Canadian studios were 'stealing' our staff, our business and our glory. We have seen a spate of UK businesses bite the bullet and set up Canadian offices, and some of the key studio leaders in Canada hailed from Britain.

But now that the UK is getting its own production support, it's time to use Canada to learn how. There is a lot we can learn from the market over there, so we asked experts in the region for their advice.

OUTWARD LOOKING

Tax breaks aren't just about inward investment. They are ambassadorial for a country, used as both means to seal a deal with investors or publishers, as well as a political device.

"For projects with tight budget constraint, the availability of tax credit can become the key factor in the go/no go decision," says Bill Bennett, Minister of Community Sport and Cultural Development on the British Columbia Cabinet. "For example, the tax credits may allow companies to hire larger teams or extend their production schedules in order to create more intricate and higher quality final products. This allows a local office (e.g. a Vancouver studio) to elevate its stature in what may sometimes be a global network of games studios for one company."

That's the obvious benefit, of course.

Territorially, tax breaks have helped support regional clusters and pushed them to grow – which should be good news for the more nascent or undernourished areas of the UK's games development scene. And it works the other way: games industry successes have helped put some regions on the agenda. This is something reps in Nova Scotia know all too well.

> ***We're certainly seeing development shift increasingly eastwards within Canada.***
>
> John Jennings, Longtail

"Because our sector is relatively new, one of our challenges is awareness," says Nova Scotia Business' Suzanne Diab.

"When people think of games development in Canada; Nova Scotia does not tend to be on their radar. It's the companies that are located in Nova Scotia and the success stories, that are generating attention and prompt attention. A local studio Fourth Monkey Media recently partnered with Walt Disney. to help develop an interactive attraction at Tokyo Disneyland and HB Studios produces games for EA Sports.

It's company successes like these that have contributed to the growth of our overall information technology sector in Nova Scotia."

In Nova Scotia, games has been the fastest growing sector compared to any other province over the last five years according to Statistics Canada 2011. And that's before the province implemented a tax break last year.

PUTTING THE BRAKES ON BREAKS

But what happens when tax breaks go away?

That's happened in British Columbia recently, where some tax deals expired – and it's on the mind of those provinces which only recently had tax breaks implemented.

"Vancouver has generally been the barometer or trendsetter in Canadian development," explains Longtail's John Jennings, executive producer at a studio in Halifax whose parent province Nova Scotia implemented subsidies late last year.

"Right now, it's seeing a decline in permanent employment for developers and a shift to project-based, or even shorter, contracts. Salaries grew high there during the boom of the early 2000s, due to competition for the best staff. With the decline of subsidies in British Colombia, studios can no longer support those salaries on a permanent basis. We're certainly seeing development shift increasingly eastwards within Canada as a result. There are probably double the number of studios in Halifax now, compared to five years ago. Chasing the subsidies around the country is something we need to avoid though. We need to aim for long-term stability and avoid a dependency on subsidies caused by offering crazy salaries that are reliant on subsidies being in place."

Nearby HB Studios, also based in Nova Scotia, says the lesson there is to see tax breaks as an added bonus, not the foundation for a business.

Says founder Jeremy Wellard: "HB had been around for eight years before the Nova Scotian Digital Media Tax Credit was introduced in 2008, and we had a staff of around 130 people by then. The success of the company was established well before the DMTC came into play and we endeavour to not rely on it for any of our operations, because it is not particularly secure. The DMTC was up for renewal in December 2012 and it was only at the last minute that the provincial government decided to extend it for one year to allow time to fully review it's worth. Nobody knows whether it will continue after the end of 2013."

That might give some pause for thought. But no one said any tax break will last forever. The most important aspect to any economic deal supporting games developers is that it has started a dialogue with the government.

"As an indie studio we would put government support at the top of the list, above tax breaks," adds Matthew Doucette, co-founder of indie studio Xona, another Nova Scotia studio that has watched tax breaks help other areas of the country long before the region ever got its own one.

"NSBI and its subsidiaries have been amazingly supportive of Xona Games, keeping us in check and sending us around the world to meet our publishers and collaborators face-to-face."

STRENGTHS AND WEAKNESSES

But tax breaks do help countries compensate for other weaknesses, or highlight difficult public policy structures in rival nations.

While UK firms have frowned at Canada, the region's growth has as much to do with more robust immigration policies than economic deals. That's something Geomerics knows a lot about. The British middleware firm has set up an office in Vancouver.

"This is not just a question of tax breaks," says founder Chris Doran. "As a technology company we have done very well through the UK's system of R&D tax credits, and our decision to open an office in Vancouver had very little to do with taxation."

Indeed, Geomerics doesn't make games, so can't claim back as studios can. So why Canada?

"What has really stood out was how easy they made everything. We recently tried to recruit a new employee from a non-EU country, and the obstacles the UK government put in your way were staggering.

"By contrast, the task of opening a Canadian office, with official company registration and approval, and immigration, was completed in under a month. I think there are clear lessons here for the UK government."

The move was so easy it tempted Geomerics away from the likes of California, too.

"This was much more a case of Canada and the USA competing for our business, and the Canadians won because they made everything so much easier. Over time we intend to fill the Vancouver office with staff recruited locally, but they are there doing the job locally that we simply could not continue to carry out from the UK.

"On a wider scale, I can see many ways that Vancouver, and Montreal, help drive the global games business. It is a well researched fact that highly technical industries thrive when large clusters are established to act as centres of excellence."

A WARNING FROM THE FUTURE

But as tax breaks have hit maturation in other regions, and UK studios prepare to claim theirs from April, there are some important lessons Canada has learned along the way. Tax breaks, in theory, will boost demand – but nations need a complimentary investment in talent to supply that.

Jayson Hilchie, head of the Entertainment Software Association Canada says: "We are becoming the victims of our own success. Our industry is growing faster than the domestic supply of labour available to staff all of the positions in certain locations. Canada has the largest video game industry in the world per capita, which means that there is going to be a strain on resources. This can be alleviated, to some extent, by increasing the number of students graduating from programs that feed into our industry."

But, who knows, maybe that's an opportunity to reclaim some of the ground we lost to Canadian provinces just under a decade ago?

Top-to-bottom: Jayson Hilchie, head of the Entertainment Software Association Canada, and Babel Media's Richard Leenfeller

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NOVA SCOTIA
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Q&A: JADE RAYMOND, MD, UBISOFT TORONTO

Ubisoft Toronto is helping cement Ontario's position as a global games hub. How important is the city to the Ubisoft ethos?
When you consider the high level of training, the thriving indie game scene and its diverse local culture, Toronto offers tremendous advantages for a studio like Ubisoft Toronto. Ontario is filled with talented individuals who are among the best educated in the game development industry.

In addition, Toronto has a rich history of film and entertainment production, making this city a cultural centre for Canada, and a breeding ground for new ideas and innovation. The size and diversity of the game development community and ecosystem in Toronto demonstrates there is a lot of room for dynamic growth in this city, and all across the province of Ontario.

Beyond tax breaks, what else makes Canada strong for games development?
Well, the extreme weather in our country means we enjoy a great deal of time indoors brushing up on our gaming skills. But seriously, Canada offers some of the most advanced education and training programs in the game development and publishing industry which results in a deep pool of creative and motivated talent. The Canadian games industry has a healthy ecosystem – it is filled with large and small companies proving that there is a prosperous community looking to keep the industry fresh and drive innovation in this country.

Were there any other key 'Canada-specific' industry trends or challenges that currently affect the way Ubisoft Toronto is evolving?
Canada has become an important hub driving the advancement of virtual production, and this creates exciting opportunities for Ubisoft Toronto as we push performance capture technology and techniques forward. In September 2010, we unveiled our performance capture studio which allows for the creation of high-quality content for games by creating deeper characters and more immersive storytelling.

GIVE US A BREAK: BIG BLUE BUBBLE CEO DAMIR SLOGAR EXPLAINS WHY TAX BREAKS MATTER

TAX BREAKS ARE very important, not only to our studio, but to the Canadian gaming industry as a whole.

They might sound like something that would give Canada an unfair advantage, but people often forget that Canada is lacking in many other areas that the US or UK games industries take for granted.

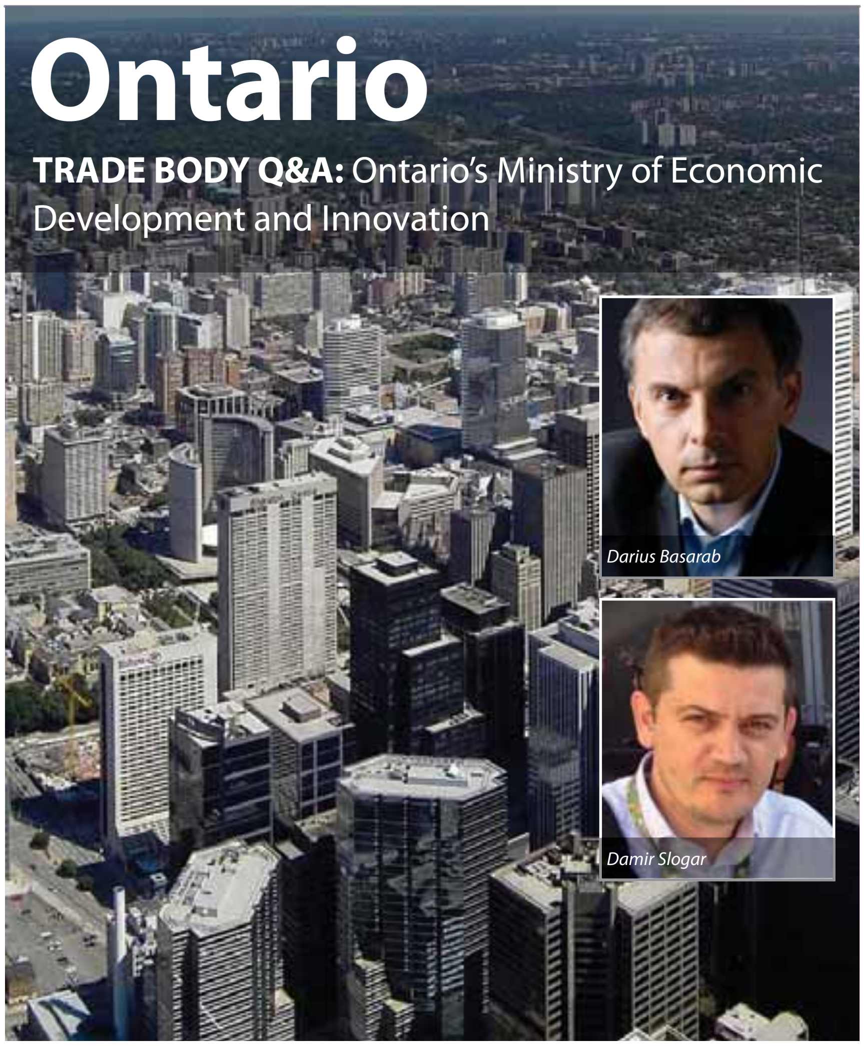
For example, access to start-up capital, as well as any kind of VC investment, is almost nonexistent in Canada. Banks are also very conservative, so getting a start-up loan or even getting crowdfunded (Kickstarter still doesn't work in Canada) is almost impossible. On top of that, things like ridiculously high bandwidth cost, lack of any major publishers – I am talking about HQ, not actual presence – and you will see that things are not as rosy as they might seem from the outside. Tax breaks and government initiatives are a great way to bridge that gap.

So tax breaks are helping redress the balance. It is still very hard to find a major games industry brand that you can tie to Canada. Everyone can name numerous internationally known games or game characters from the US, UK or Japanese games companies, but you will struggle to find a Canadian counterpart.

However, things are looking better with the uprising of new indie studios that are doing a great job of putting Canada back on the map.

Ontario

TRADE BODY Q&A: Ontario's Ministry of Economic Development and Innovation



Darius Basarab

Damir Slogar

Develop speaks to Darius Basarab at Ontario's Ministry of Economic Development and Innovation, about the body's aim to continue growing the local games cluster

How is your organisation involved in the Canadian games industry?
The games industry, as well as the digital media sector, are important parts of the Ontario economy. The Ministry actively works with a wide range of private sector partners, local economic development offices, academic institutions, as well as numerous not-for-profit industry trade organisations committed to the growth and the promotion of the industry. Our efforts are also strengthened by close collaboration with other ministries, government levels and government agencies like the Ontario Media Development Corporation.

What challenges currently face Ontario's games development sector?
Many experts have commented on the fact that the entire games industry is currently in a state of transition. The influence of mobile, tablet and free-to-play games cannot be ignored, and business models which have served the industry for many years are currently being adjusted. These challenges are evident in Ontario's games development sector, as they are all around the world. Many companies in Ontario have embraced these challenges as an opportunity to develop alternative distribution channels to traditional developer-publisher models. This is also a great opportunity for Ontario to shine above other competing jurisdictions thanks to the availability of talent in the sector, as well as the flexibility built into our tax credits.

A lot of people talk about migration to Canada. What about the other direction – do Canadian games developers secure industry employment outside of their home nation?
Ontario-raised and trained games developers, as well as other professionals in the digital media space, have been extremely successful outside of their home nation. Many of these individuals have gone on to develop and produce iconic products in Hollywood and in the digital gaming industries. The talent which has graduated from Ontario schools is second to none, and has a track record of recognition by the Academy Awards, as well as the numerous digital gaming and animation societies. Many of the most influential games makers are from Ontario and they left their home nation soon after graduation in their youth. Many of these individuals are now very experienced and looking to return home for any number of personal reasons. With the growth of the gaming industry in Ontario these individuals now have the opportunity to return.

HERE'S WHY ONTARIO, CANADA IS YOUR NEXT BIG IDEA

ONTARIO
CANADA

Innovation is at the core of the information and communications technology industry in Ontario, Canada. Our diversified talent pool of more than 300,000 skilled ICT workers – close to 60% of whom are post-secondary graduates – working with world leading infrastructure and communications networks means invention and commercialization come easy in Ontario. Ontario is home to industry giants and small start ups alike with strengths in areas that include digital gaming, mobile app development and wireless communications. We offer some of the most generous R&D tax credits in the world and corporate taxes that are lower than the U.S. federal/state average. You need to be where top talent and competitive costs converge. Make Ontario your next big idea.

YourNextBigIdea.ca/ICT

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TECH TRIO: MONTREAL'S AUTODESK, BABEL AND AUDIOKINETIC ON DEV GROWTH IN CANADA

How have you seen Canada's industry grow or change over recent months and years?
Martin H. Klein, Founder and President, Audiokinetic: Since the beginning of 2000, Montreal became a major player on the international gaming scene. Attracting many major studios from all around the world, Montreal has over 350 development studios with more than 8,000 people working in the field. Montreal developers are recognised for their quality of work and talent.

All signs show that Montreal will continue to grow significantly in the near future. Vancouver is strategically well positioned; near the American West Coast, with a skilled workforce and many incentives.

Maurice Patel, Senior Manager, Media & Entertainment Industry Marketing, Autodesk: We have seen strong and consistent growth in the games sector, especially in Montreal. Before Ubisoft opened its offices there in 1997, the games industry in Quebec was very small, but it grew rapidly into a large industry with thousands of employees. Other centres include Vancouver and Toronto although in the last few years there has been a shift to the East driven in part by a steep rise in real estate and living costs in the West. The same trends in consumer demand that are impacting the games business globally are also true to Canada, the most significant of which is the rapid growth in demand for casual/mobile games. Recently we have seen overseas companies opening post-production facilities in Montreal.

Richard Leinfeller, Chief Exec, Babel: There has been a huge influx of European and US development talent as those locations become too expensive and inflexible for large scale game development. Many of the Montreal studios started doing low cost QA or art only. Many, however, have now grown to develop whole triple-A titles, moving up the value chain.

What in particular does Canada offer a games tech company like yours?
Patel: Canada offers a healthy ecosystem for games development, which is the result of multiple interrelated and co-dependent factors. One obvious factor is a strong pool of talented graduates thanks to an excellent education system. Less obvious ones include the skill and experience that comes from a long history of excellence in computer graphics, thanks to Canada's aerospace industry.

UBIQUITY: UBISOFT HAS TWO MAJOR QUEBECOIS STUDIOS – WE SPOKE TO BOTH

How important is your studio's home city to the kind of place your studio is?
Nicolas Rioux, Managing Director Ubisoft Quebec: That is a very interesting question because we often hear our employees talk about the 'human size' of the studio. Even if it is a mid-size studio, we all know each other.

This particularity of the Quebec City studio allows us to recruit and keep talents that are not only looking to work on leading franchises, but also for a quality of life.

The importance of finding the right balance between professional and personal life for our teams is without a doubt influenced by our location, as Quebec City is renowned for being one of the best locations for overall quality of life in the world.

Being a mid-size city, Quebec has reached a good balance between economic dynamism and quality of life.

Francis Baillet, Vice President of Human Resources and Corporate Affairs, Ubisoft Montreal: The location of Ubisoft in Montreal is key. The city is well known for its creative strength and leadership with other companies like Cirque du Soleil or Moment Factory, but it is also known for its strong gaming ecosystem, which Ubisoft highly pioneered with the opening of the studio nearly 16 years ago.

TRADING PLACES: PROFILING TWO ORGANISATIONS KEY TO MONTREAL: ALLIANCE NUMÉRIQUE & TELEFILM CANADA

How is your organisation involved in the Canadian games industry?
Géraldine Philippin, Communications Director, Alliance Numérique: We have served as the business network for Quebec's new media and interactive digital content. Alliance Numérique has close to 200 members issued from the video game, eLearning, internet and mobility industries. It supports their development by offering them a vast array of services and activities. In order to favour the growth, competitiveness and success of businesses, Alliance Numérique multiplies partnerships, meetings and exchanges on both the national and international level.

Alliance Numérique also acts as a privileged speaker to public powers.

Finally, Alliance Numérique is the organisation behind the Montreal International Game Summit (MIGS), an annual conference initially created in 2004, which will celebrate its 10th anniversary in 2013, to meet the needs of the Quebec video games industry, which currently employs over 8,000 workers. It aims to develop expertise and knowledge transfer as well as promote trade and business development among all of the industry stakeholders from Canada and abroad.

Carolle Brabant, Executive Director, Telefilm Canada: Telefilm Canada is dedicated to the cultural, commercial and industrial success of Canada's audiovisual industry.

Through its various funding and promotion programs, Telefilm supports dynamic companies and creative talent here at home and around the world. Telefilm also administers the programmes of the Canada Media Fund. To stay in touch with the industry and to let them know what is happening at Telefilm, we leverage our various platforms to stay connected, whether it is our Website – **www.telefilm.ca** – or our social media channels on Twitter and Facebook.

Beyond tax breaks, why else is the province so strong as a games development destination?
Philippin: One of the main assets Quebec holds is the quality and creativity of its workforce. Quebec is often perceived as a gateway to Europe in North America.

It's unique location can thus provide an ideal environment to create games that can touch the sensibilities of both continents.

Also, Montreal and Quebec City are cultural hubs with diverse and dynamic artistic scenes. Their vibrant energy, the relatively low cost of life and the bilingualism can attract both English and French employees from abroad.

Finally, the province of Quebec is well equipped with numerous universities and training centers.

Brabant: It is Telefilm Canada's mandate to promote the Canadian audiovisual industry; in addition to supporting cinema we also administer the funding programmes of the Canada Media Fund.

INDIE PERSPECTIVE: XONA GAMES' MATTHEW DOUCETTE ON THE ISSUE FACING ALL STUDIOS

THE CHALLENGES FOR Canada are the same everywhere. When you look at the top retail games each year there are plagued with sequels.

In the top 20 retail games starting on the Xbox 360 in 2012, only three were not sequels. I believe the solution lays in the innovation that only indie studios offer. I can foresee a great change in the gaming landscape. The next pressing issue is how to market the enormous onslaught of indie games to find the gems. Everyone is doing it wrong, from Steam, to Xbox LIVE, and especially the App Store. However, Steam is on the verge of some great solutions. Canada is famous for its tax breaks but while subsidies are very much appreciated, since making games has been a passion for Jason and I for 30 years, they are ultimately icing on the cake. As an indie studio there are many financial concerns, the biggest is just simply surviving at all. The tax breaks will come into greater meaning for us as we continue to succeed.

As an indie studio we would put government support at the top of the list, above tax breaks. NSBI and its subsidiaries have been amazingly supportive.

AN EX-PAT SPEAKS: HB STUDIOS FOUNDER JEREMY WELLARD ON SWITCHING HOMES

"I MISS LONDON, my hometown, but the quality of life here is really rather special."

You hear that a lot from UK ex-pats who have hopped oceans to set up games businesses in Canada.

HB Studios CEO and founder Jeremy Wellard made the switch a decade ago – before tax breaks came to Nova Scotia, and before the Canadian games development boom became headline material. But not much has changed in that time, except the higher profile.

"Generally games developers are a young crowd and Canada, in all its diversity, offers a fantastic lifestyle for that age group," says Wellard.

For the studio founder, the challenge isn't around games subsidies, it's hiring staff: "The biggest challenge in Nova Scotia is currently recruitment. Every development studio in the country seems to be recruiting. Available Canadian developers are very difficult to find and the current, right-leaning federal government has been increasing the restrictions around bringing in foreign workers. We have had to turn down projects because we cannot find software engineers quickly enough."

Q&A: LONGTAIL STUDIOS

The studio's executive producer John Jennings on tax breaks, talent and national trends

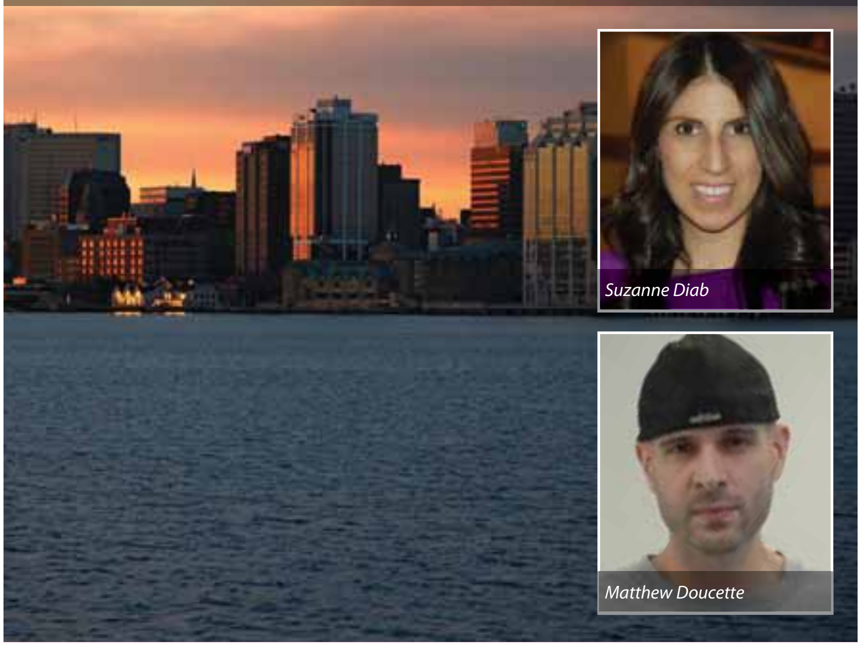
Are tax breaks important to your studio?
They certainly allow us to remain competitive with other developers, but they're not the be all and end all that our publisher looks for when choosing to work with a studio.

Are there any other key industry trends particularly apparent in Canada today?
Of course, we're seeing the same boom in iOS and Android micro-studios appearing throughout the country, even here in Halifax and throughout the Maritimes.

What makes Canada appealing to those from other countries pondering a move for work?
There isn't really 'one culture'. Due to its sheer size, there's great diversity in the country, geographically and culturally, so it can appeal to almost anybody. East, West and Central Canada all feel very different. Immigration is also relatively easy, in comparison to entering the US or Europe. In addition, the Canadian Economy hasn't suffered in the same way as the economies of Europe and the USA, making it easier for families

Nova Scotia

TRADE BODY Q&A: Nova Scotia Business Inc


Suzanne Diab

Matthew Doucette

Develop speaks to, Suzanne Diab, NSBI's Marketing and Communications Advisor, about supporting a cluster away from the big Canada cities

How is your organisation involved in the Canadian Games industry?
Nova Scotia Business Inc. is Nova Scotia's business development agency. Five years ago we identified the games development sector as a key opportunity for Nova Scotia, and now we are home to a thriving base of local companies in the digital media sector – HB Studios, Fourth Monkey Media, Silverback Productions, and many more.

Just recently, we attracted Frontier Developments to our province, the studio behind titles like *Kinectimals* and *LostWinds*. They selected Nova Scotia for its first North American location.

Why is the province so strong as a games development destination?
Nova Scotia offers several key advantages including cost-competitive operating costs, an educated and loyal labour pool, a strategic nearshore location to the US and Europe, financial incentives, a world-class infrastructure and a growing ICT sector.

According to KPMG's 2012 Competitive Alternatives report Halifax ranks number one for cost competitiveness in video games production out of all global mature markets surveyed, and is in the top ten out of all global mature and developing markets.

Halifax was also ranked as number one for operating costs when compared to key sector cities in Canada, the US and Europe in the software development sector.

Nova Scotia is Canada's university capital and is home to ten universities and 13 community college campuses. And according to Statistics Canada, Nova Scotia has on average, over the last five years, 16 per cent more ICT grads per capita than the Canadian average.

Speciality degrees relating directly to industry needs are offered throughout the province. These include Graphics, Gaming and Media, Artificial Intelligence and Intelligent Systems, Communications Technologies and Cyber Security, as well as SAP Software Expertise.

What about key games industry trends apparent in Nova Scotia today?
The industry in the province is growing in diversity and a lot of the games development skills are being applied in other industries across the province.

A recent study by Nordicity (2013) says that the majority of interactive media firms in Nova Scotia are generating revenue by developing products and services in education, training, simulation and gaming, with most work being done on proprietary platforms, and various mobile or web-based platforms.

How are those from outside Nova Scotia and Canada supported in moving to the province to work in games?
We have a team of labour strategists on hand that works closely with provincial departments like the Nova Scotia Office of Immigration. That office is also active in recruiting, and they attend international recruitment events focused on the digital gaming sector.

In addition to attracting people to the province, Immigrant Settlement and Integration Services (ISIS) is the region's leading community organisation.

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BRIGHT LIGHTS, BIG CITY: WHY GEOMERICS EXPANDED TO CANADA

WITH ITS LIGHTING technology becoming increasingly popular around the world, it was inevitable that global expansion beckoned for Geomerics.

After surveying the North American West Coast, it settled on Canada because it makes it as "easy as possible" for businesses to set up, explains founder Chris Doran (*above*).

"Once we had settled on Canada, the main choice was between the two main centres of game development: Vancouver or Montreal. We have customers in both centres, and either would have made sense. In the end we went for Vancouver for two reasons. The West Coast location made it easier to offer worldwide support, and the first wave of staff we were sending out all preferred Vancouver."

Geomerics' Vancouver office will be staffed with engineers working directly on the global illumination tool, but the actual principle of expansion was a matter of global scope and government support – not tax breaks specifically, as it isn't making a game.

Doran adds: "The relevant authorities were all incredibly helpful. We first approached the Canadian representative at UKTI, who put us in touch with the relevant people in Vancouver. They then walked us through the main steps in establishing a branch office and completing paperwork for immigration. Finally they put us in touch with accountants to set up payroll and book-keeping, and they also helped us find an office and accommodation for staff. There were some professional fees involved, as you would expect, but they were very light and the whole operation was surprising cost-effective."

FAMILY AFFAIR: SILICON SISTERS CATERS TO AN UNDERSERVED FEMALE AUDIENCE

SILICON SISTERS INTERACTIVE was formed to create high quality games targeted at the female audience.

Bailey Gershkovitch co-founded the studio with with Kirsten Forbes, and the pair spent the first six months of their endeavor researching everything they could find that might inform the quest to truly understand women's relationship with technology, gaming and entertainment.

They created a document that they refer to as 'the women's gaming bible' based on these findings, and that is what drives all game design at Silicon Sisters.

"The female gaming market is the fastest growing and most underserved market in the industry," says Gershkovitch.

The studio's first project was a series for 'tween girls called *School26*, and the studio's current project is a playable romance designed from the first line of code up with adult women in mind.

"It's the studio's first stab at creating a light romp through what women have been devouring for decades – romance novels," she adds.

Silicon Sisters is just one of a clutch of Canadian indies benefitting from the global games transition, with smaller firms springing up as the larger studios shrink.

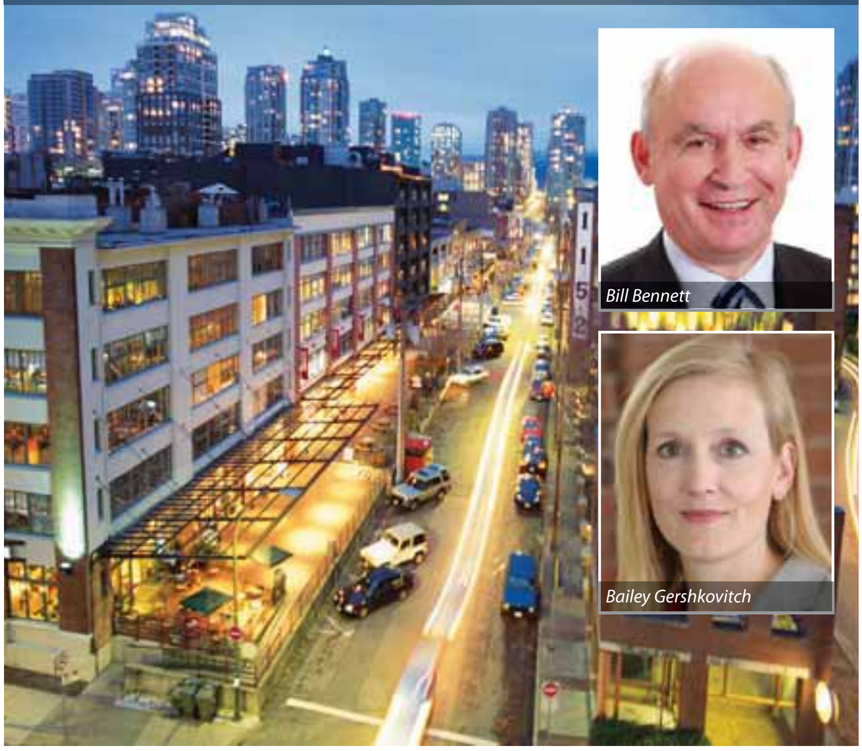
"The indie scene in BC is growing by leaps and bounds," says Gershkovitch. "It seems every time I attend a meeting I meet someone new who has started a studio.

"There are a number of issues impacting the dev scene in Canada, including somewhat of a funding gap on the private sector side. Canada has a history of supporting primary industries – investment dollars tend to flow to mining and similar sectors.

"However, the digital space continues to offer tremendous growth and reward. We just need a few big hits to help investors take more risk."

British Columbia

TRADE BODY Q&A: British Columbia Government



Bill Bennett

Bailey Gershkovitch

Develop speaks to Bill Bennett, Minister of Community, Sport and Cultural Development on the British Columbia cabinet about games

How is your organisation involved in the Canadian games industry?
The Province of British Columbia offers a range of services, resources and expertise aimed at enhancing BC's position as a highly competitive international centre for investment and innovation.

Why do you think the province is so strong as a development destination?
Talent is one of the key reasons that companies choose to locate in BC. They see the strength of the labour force, the creative atmosphere. The collaboration between academia and industry, and also between companies within the industries are important consideration factors.

The British Columbia Provincial Government, City of Vancouver, other municipal governments and Federal Government all work to support game companies who are investigating in BC.

With the convergence in film, media, games development and visual effects, Vancouver has become an attractive jurisdiction to locate operations. Companies are able to feed off the momentum of all these creative industries in one tight knit location.

One recent investor we worked with indicated that the historical significance of Vancouver is another reason they have elected to locate here. They are impressed with the history of companies, such as Electronic Arts, which started here, and Club Penguin which located in Kelowna.

The existence of institutions such as the Centre for Digital Media is another draw for companies. They are interested in the interaction between industry and academia. The new operations at CDM are extremely impressive and they have teams housed there which are dedicated to specific companies and specific projects.

What challenges currently face British Columbia's games development sector?
The global interactive gaming industry is undergoing a massive transition driven by digitisation of all entertainment content. Big console studios, are under pressure to move away from producing console games towards the development of less expensive mobile games for phones or social media.

Historically, British Columbia's strength was in large console games development. As the shift from console to mobile occurs, traditional console companies like EA and Rockstar have streamlined their operations, whereas small- and medium-sized mobile and social media companies have grown.

British Columbia is home to a thriving and growing entrepreneurial community of small games studios looking to capitalise on new trends in smart mobile devices, social media, and digital distribution and increasing broadband penetration. Over the past year, several video games developers have established a presence in British Columbia, including DeNA Gameview, Gree, Gamehouse and Microsoft, among others.

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If it ain't Kiss...

Could a slogan from an iconic 1970s record label really inspire a shift in publishing towards the indie studio model? For Kiss it did, as co-founder **Darryl Still** explains

Kiss founder Darryl Still (above) believes his company is part of a revolution in indie games publishing that resembles the rise of Stiff Records (right) and other indie labels in the music business

kiss
keeping it simply simple
STIFF RECORDS

IT IS GENERALLY accepted that June 4th, 1976 was a key date in the history of indie music. This was the night that the Sex Pistols played the Lesser Free Trade Hall in Manchester.

It was not a stunning gig, by all accounts. There were only around 40 people in the audience, but among them were Steven Morrissey, Ian Curtis, Peter Hook, Mark E Smith, and even Mick Hucknell. Each of these, and more, was inspired enough by the events to form a band of their own. Joy Division, New Order, The Fall, The Smiths, A Certain Ratio, Ludus, Simply Red, Buzzcocks and Magazine all came about because of members' attendance at that one event. And thousands of other kids were inspired to form bands by the buzz that transpired.

ON THE RECORDS

As a natural side effect, young entrepreneurs set up publishing companies to distribute all the new exciting output; Stiff Records, Rough Trade, Factory Records. Creativity was the key driver, allowing artists to maintain control of their own work and eschew corporate methodology by ensuring that a larger share of the money earned landed at their feet.

I don't necessarily have a tipping point like the Pistols' gig to put up as a simile for our industry. Maybe it was *Angry Birds*. Maybe it was the sudden shift from boxed to digital, with its lack of inventory issues and fast cash flow making large publishers budgets no longer a pre-requisite for success. Whatever the trigger is, I do believe we are now at that revolutionary point where the indie developer, like the indie band, can retain a lot more power and control over their output.

It is true though, that the skill set and focus of the developers themselves should still be on what they are good at, namely producing great, innovative gaming experiences. They should not be focusing on the day-to-day issues caused by trying to distribute their product, but they certainly do not need to be handing their baby over lock, stock and barrel to a big corporation.

That is exactly why we have created an indie label for them to distribute through. Kiss is there to give indie developers a simple outlet for the fruits of their labour. We have contracts in place with every major digital vendor in the market. We have a thriving indie catalogue already, and there is major strength in numbers when entering this market. Being part of a catalogue allows a title to be included in more promotions, get more exposure and, we calculate, double its potential revenue, when compared with the option of being a small, lone fish in a massive pond. The vendors themselves much prefer titles to come to them this way, as well. It saves them multiple points of contact, multiple contract negotiations, multiple sales reporting and payment setups, and most of all, when they want to run a promotion, they can just phone one number and say, 'give me six games that fit this description to include in my next promo slot'. Indeed, they like the model so much some of them now bring developers directly to us and tell them, 'if you put your game through the Kiss label, we will take it'.

KEEPING CONTROL

But the very best thing about Kiss is that independent developers maintain complete ownership of their title, complete artistic integrity and independence, and best of all, the vast majority of the revenue earned on their title. Kiss takes just a small agents fee for getting the titles listed and managing them in our catalogue through the sites of all the vendors we work with. We do not run an advertising budget or host expensive PR stunts – though we can help get the titles reviewed. We just make sure the exposure on the sites is maximised and the revenue opportunity through promotions within the vendors' pages is optimised.

Our experience in managing the 1C digital catalogue for the last four years added to our teams combined 60-plus years of industry experience, with the likes of EA, Activision, Ubisoft and Nvidia, has given us many insights into how studios work, and how they should be treated. Our biggest inspiration in starting our label however would still have to be Stiff Records, the company who brought the world Elvis Costello, Ian Dury, The Damned, Wreckless Eric and many other greats. Their slogan was: 'If it ain't Stiff, it ain't worth a fuck'; which makes our 'Keeping It Simply Simple' seem a little shy and retiring, but I think, deep down, the sentiment is the same.

So if this is our Lesser Free Trade Hall Moment, don't be one of the 22 million referring online about the gig (according to Google statistics) or the many thousands who claim to have been there – some of whom were not even born. Be one of the forty who actually were there. Join us and help change the face of independent games development forever. Just like all those musicians did… only with less drugs. ■

www.kiss-ltd.co.uk

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IT'S TIME
FOR A NEW GAME ...

MTG 2013

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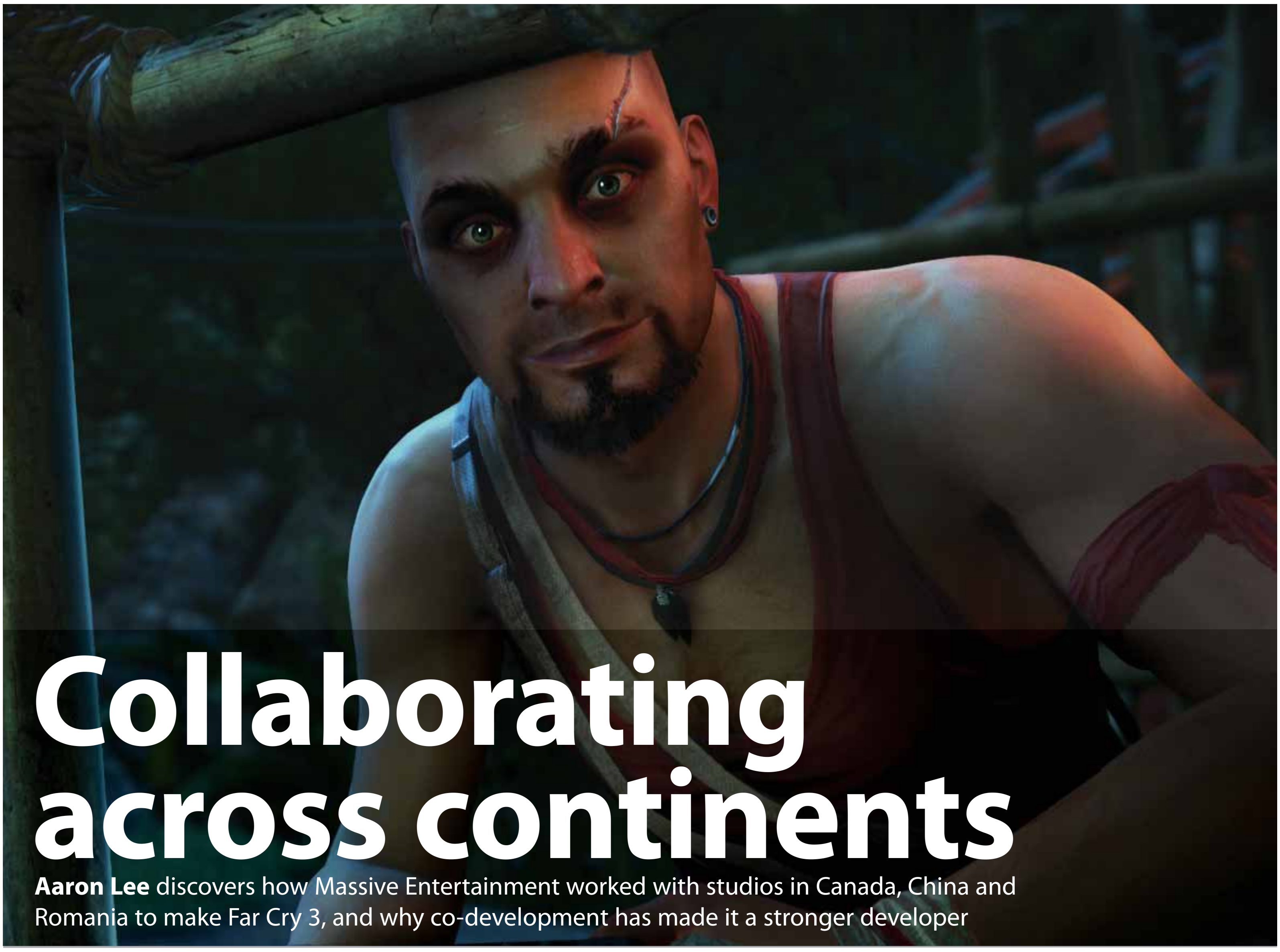


Collaborating across continents

Aaron Lee discovers how Massive Entertainment worked with studios in Canada, China and Romania to make Far Cry 3, and why co-development has made it a stronger developer

BUILDING TRIPLE-A CONSOLE games is tough. So it's no wonder that development is increasingly being shared between two or more studios at a time.

For Swedish studio, Massive Entertainment, the process of making *Far Cry 3*, a first-person shooter set on a beautiful, yet threatening island paradise, turned out to be a huge learning curve.

Not only did the Malmö-based developer have to take up the reins as support studio on *Far Cry 3*, working with the main team at Ubisoft Montreal and others; it also had to master a genre it previously had no experience in.

"This was an experience that we wanted to have," Massive's managing director David Polfeldt tells *Develop*. "We love RTS games, but we were increasingly concerned about being typecast in a genre that has faced a lot of commercial challenges over the last couple of years."

As Polfeldt says, Massive's experience has primarily been in RTS games. It created *World in Conflict* and the reasonably well-regarded *Ground Control* series, before being acquired by Ubisoft in 2008.

"We got involved on *Far Cry 3* very early on," continues Polfeldt. "It was an important moment for us, since we had just been acquired by Ubisoft and we were mutually still finding out how to make the most of the new relationship.

"As a studio, we had long wanted to broaden our portfolio beyond real-time strategy games, and also we were hungry for a proper experience with the current generation of consoles. When we announced the project internally, people were very excited, especially because it was a shooter."

> ***"Everything gets amplified when you collaborate across the oceans like this. Bad decisions ripple further. But it also works the other way around."***
>
> David Polfeldt, Massive

CROSS-COUNTRY CODE

Massive's main contributions to *Far Cry 3* were its multiplayer and co-op campaign. It also assisted with the engine itself, which is was built on an evolution of the Dunia Engine, not forgetting additional collaborative areas that stem from the fact it has been sharing code and art for almost three years.

This process of exchange wasn't as straightforward as walking across to another department or even another building. With its lead development studio based in Montreal, *Far Cry 3* was being forged and shaped, built and rebuilt in completely different time zones. Polfeldt explains what this meant for the project to begin with.

"I think the first big decision to be made for anyone working on co-development is if you will share or split the code branch, because, once that key decision is made, it will have a huge impact on the development process," he says. "In *Far Cry 3*, we decided to keep everything in the same branch. So, on a good day, we'd show up at work and capitalise on the 'free' work that had been added in Montreal the previous night. It could be art fixes, new objects, weapons, animations or voice acting that suddenly were in place."

While this had positive outcomes, it just as easily had negative ones.

Polfeldt continues: "On a bad day, we'd show up at work and discover that something had been changed or fixed that worked well for single-player, but also created new issues in multiplayer or co-op that would set us back a day or two. And vice versa, of course. We would deliver the same potent mix of gifts and bugs to our partners."

One of the challenges Massive faced because of this collaboration was related to the AI that needed to act differently in single-player and co-op modes.

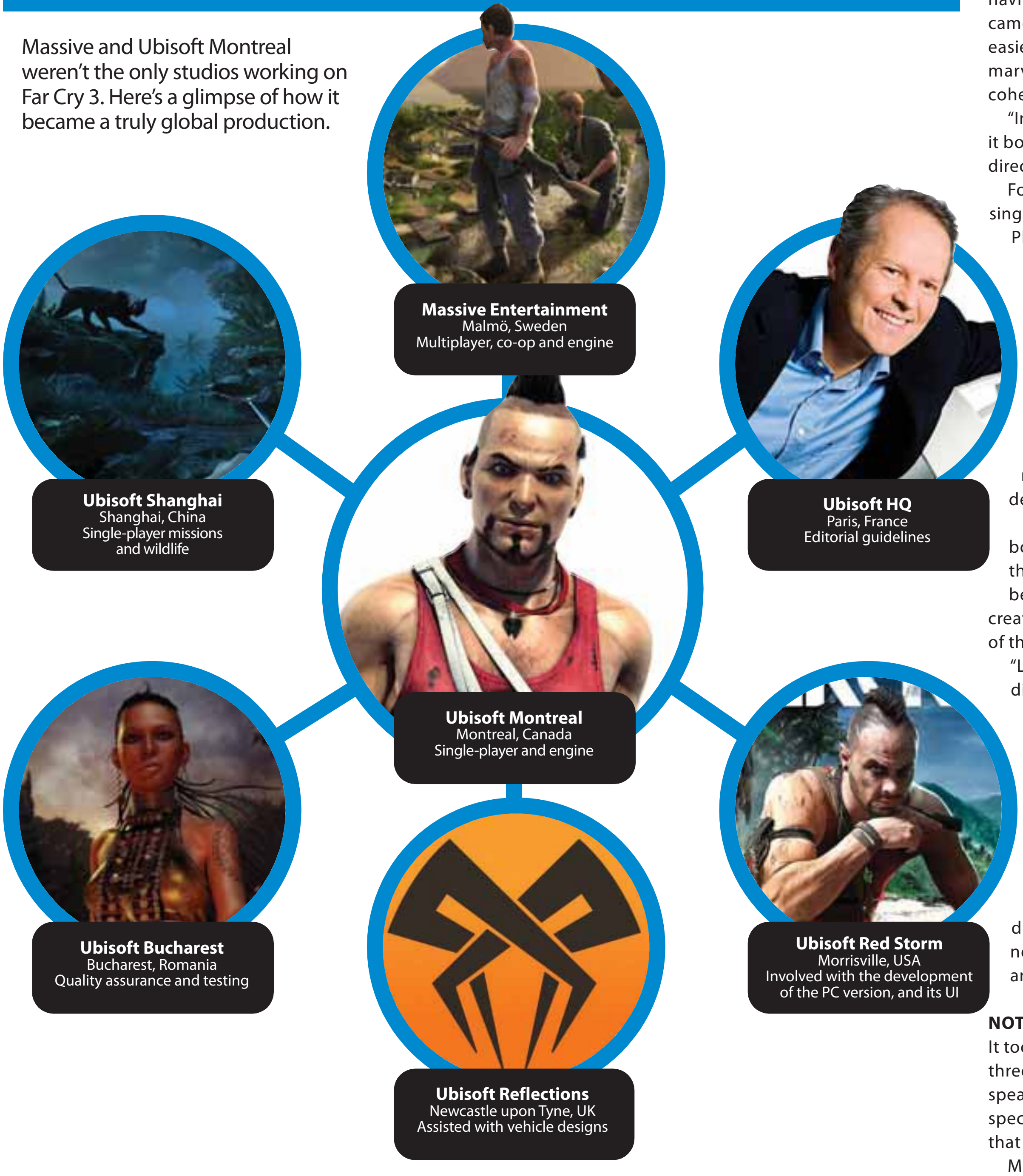
"In single-player, some AI behaviours were dressed up in animations or camera sequences. But, in co-op, we couldn't

▶

Far Cry 3's development was a chance for Massive's David Polfeldt (above) to exercise diplomacy and forge productive partnerships

MANY HANDS MAKE LIGHT WORK

Massive and Ubisoft Montreal weren't the only studios working on Far Cry 3. Here's a glimpse of how it became a truly global production.



TIPS TO CO-DEVELOP IN HARMONY

- **Empower the co-dev studio** – Passion comes from ownership, so the lead studio must cleverly define a scope that allows some autonomy and creative leeway.

- **Manage the interdependencies carefully** – Each interdependency will add risk and communication needs. The more you have, the harder it will be to succeed.

- **Build the collaboration around vision and story** – It is much easier to have everybody working in the same direction if the vision and story are well understood. Most developers are able to fill in the blanks if they get the high-level view. Detailed specs and 'task lists' require an enormous effort from the lead studio, and are not likely to do the trick anyway.

- **Finally, never underestimate the value of real life meetings** – Creative people must be allowed to meet in person in order to develop an understanding of each other that goes beyond just work. Be generous with flights and travel. **David Polfeldt**

afford to let any individual AI to 'pause' the game to play out an animation. Since there were always several players at once doing different things, we required the AI to react to several players' simultaneous choices."

Montreal was just one of the studios Massive was working with. Ubisoft Shanghai and Bucharest were also involved, and Polfeldt acknowledges that this made for a sensitive development process.

"As far as I see it, everything gets amplified when you collaborate across the oceans like this. Bad communication gets amplified to terrible communication, bad decisions ripple further than you'd like them to, and so on. But it also works the other way around. A strong vision gets stronger and sharper, good art gets condensed to amazing art and good code supports lots of developers at once."

ACROSS OCEANS, THEY MEET

Even so, Ubisoft Montreal, Massive and the other Ubisoft studios (see 'Many hands make light work' for full list) were working in tandem to construct *Far Cry 3*, each of them having to handling the complications that came with such as complex project. That's far easier now than it sounds, which makes it a marvel that the game feels as polished and cohesive as it does.

"In order to make it all feel cohesive, I think it boils down to the strength of the creative directors' vision," says Polfeldt.

For *Far Cry 3*, the creative director for single-player, based in Montreal, was Patrick Plourde, while Massive's creative director Magnus Jansén oversaw multiplayer.

"Patrick is an absolutely amazing guy, maybe the best I have met in this business. He is also very funny and massively inspiring," says Polfeldt.

"What he did well during *Far Cry 3* was to spend a lot of time analysing the production realities, and by being so in tune with that, he was able to make some very bold and clever decisions for the game.

"It's easy to be creative if you have no boundaries, but with games development there are a lot of boundaries to respect, because we are not creating art, we are creating an interactive tool. Pat is the master of that delicate balance.

"Luckily for the project, our creative director, Magnus, is the same. He starts with a deep understanding of the team's strengths and weaknesses, so the two of them hit it off early and became friends in the process."

Polfeldt believes the most important factor in making this relationship work was travel.

"Nothing beats meeting in real life, and we made sure that the creative directors could meet whenever they needed to. That way, we could anticipate and avoid potential problems."

NOT SUCH A FAR CRY AFTER ALL

It took a team of 90-plus developers some three years to make *Far Cry 3*. The result speaks for itself, with high praise from the specialist press across the board and sales that surpassed 4.5 million in February.

Massive's goal with the *Far Cry 3* project was to move away from RTS games and release a major console title that achieved higher sales than any of its previous games. And in Polfeldt's words, it nailed it.

"When we started this journey, we were a new member in the Ubisoft family, and it was really interesting to dive into projects that gave us an opportunity to learn the secret recipe behind games that we had previously only experienced as fans. As it turned out, there is a consistent method in Ubisoft that ensures continued success, and we are now able to move forward with that knowledge firmly a part of our own DNA.

"*Far Cry 3* has allowed us to gain a lot of useful experience with regards to international collaboration. We have always been perceived as nice guys, but you really start dissecting how you work with others in these types of collaborations. So I think we are easier to work with now than we were a few years ago." ■

www.massive.se

the broken lands

Cloud + Apps =

Opportunity unleashed for indies

Across the globe, at small studios, during game jams and even on the machines of bedroom coders, a revolution is underway. The cloud, once perceived as the exclusive playground of games development's triple-A teams, is now a platform for everyone and anyone, and there's more ways it matters to small studios than you might expect

WHEN THOSE IN the games industry talk of the cloud, many think of the streaming and download methods that have long defined the platform.

In fact, the cloud offers far more to developers than you might expect, and most excitingly of all, the very same technology supporting Master Chief's constant existance in online realms is today in reach of even the smallest indies.

Agile, innovative studios like Yippee! Entertainment, Mudvark and Illyriad – profiled over the page – are today using the cloud to better monetise their games, at the same time taking them to more players, across more devices, in manifold new ways. They are also harnessing the cloud to pull data from games, authenticate player accounts, outwit piracy, embrace the second screen, and give their customers a considerably better experience.

And the cloud isn't something exclusively for the likes of MMOs and console releases. It's remarkably relevant for indies, and especially compatible with those making apps for mobile and tablet platforms. In short, the cloud and devices work best when working together, presenting small teams with a huge opportunity. And it doesn't matter if you're making a game for Windows, Android or Apple; Microsoft's cloud platform Windows Azure can help thrust your project forwards, and give you a significant boost ahead of the competition.

At the cloud's core is its knack for scaleability, which is exactly what makes it suitable for development giants and spirited microstudios alike. On a similar note, it means indies betting it all on a new game can scale their project on the cloud at a level that matches increasing success.

And it is Microsoft that is helping teams of every size get the most from the new democratisation of the cloud, through initiatives like its BizSpark and DreamSpark programmes, and with the Windows Azure Mobile Services platform, which provides developers of all kinds with a user-friendly way to harness the cloud. So what are you waiting for? Read on, and trial Windows Azure today.

Notes from the cloud

PROFILE: STEVE RUDDY, TECHNICAL DIRECTOR, YIPPEE! ENTERTAINMENT

Could you tell *Develop's* readers a little about your studio?
Yippee! is a digital entertainment company focused on creating worldwide mass market intellectual properties seeded in casual and social video gaming. Our first title *Chimpact* was released in August 2012 and has been gaining great reviews worldwide.

Before your experience of using the cloud, what was your perception of it? Did you see it as relevant to your studio?
I guess like most people we had a good impression of the cloud, but tended to think of it as supporting the large-scale modern off-site big data systems we use – for example, Dropbox, SkyDrive, GitHub, Flurry, Assembla and so on. We really only saw ourselves as customers of cloud services,rather than utilising the services directly in our games.

How has Microsoft assisted you with embracing the cloud? What elements of the cloud have you used as a result?
The native support included in Windows 8 for roaming data is simplicity itself; once you have experienced 'connected' gameplay – playing on your work desktop, continuing the same game on tablet and then on your home laptop – it really is cool. Because of this connected experience we are now exploring the Mobile Services that Windows Azure offers to support this and more, well beyond just Windows 8.

What about the cloud has had the biggest impact on your studio?
The biggest impact we find that the cloud is having is actually on our design choices for our new and future games. We find that mobile and casual gaming in particular is not always compatible with real-time multiplayer – turn-based and 'play when you can'. Co-operative multiplayer seems to be a much better fit for us. The cloud is the ideal location to store the shared game state necessary for this style of game, and straightforward cloud support opens these up for us.

What advice would you have for other small studios pondering working with Microsoft and the cloud?
On Windows 8, I'd say that it's a must. You do need to resolve update clashes, but if your data is accumulative this is straightforward. The Windows Azure Mobile Services are more involved, but a more cost effective strategy – they're free with excellent support – than building your own backend services. The possibilities opened up are astonishing.
www.yippee-entertainment.com

PROFILE: JAMES NIESEWAND, CEO AND FOUNDER, ILLYRIAD

Just what is Illyriad, and what do you do?
We're a small start-up indie game company that launched our flagship game, *Illyriad*, three years ago. We've been lucky that our first title has been extremely well reviewed, and is not only popular, but also profitable.

How has your studio typically approached the cloud?
Having looked at the various cloud options three years ago, we initially decided to go down the dedicated server route, and provide our own infrastructure services for the gameworld. At that time we felt that the cloud not only looked too expensive for a start-up indie company to swallow, but going that route would also present some fairly difficult technical challenges for us to overcome, given that our game universe is not sharded and that we don't have zoning.

And now Microsoft has assisted you with embracing the cloud.
As the game grew and our requirements for scaling became clearer, we revisited the idea of using the cloud. We compared a number of the options available and trialled a number of different services, but it quickly became clear to us that the Azure solution was the natural choice for two main reasons. Firstly, we're a Microsoft house. Our codebase is entirely Microsoft – the game runs off MVC .NET with an MSSQL backend – and the understanding of our requirements that the MS tech team has is therefore much tighter than if we had chosen a different solution. The teams at Microsoft are knowledgeable and friendly, and are really happy to talk to us when we have questions. Secondly, our participation in the excellent BizSpark programme means using the Windows Azure platform has been very cost-effective for us.

What elements of the cloud have you used as a result?
We use many different elements, all within Windows Azure. The Windows Azure Content Delivery Network has off-loaded a lot of bandwidth from our servers and increased their reliability, as they now concentrate on delivering the core game rather than assets. Windows Azure Cloud Services provides us with the websockets communications framework for our chat system and real-time communications with all of our players. We use the Windows Azure Service Bus for reliable co-ordinated messaging between the different scaled out cloud services, and we use Windows Azure Mobile Services to talk to our Windows 8 clients and push live tile updates, as well as for the built-in authentication with players' Facebook, Microsoft and Google accounts.
www.illyriad.co.uk

Worried the cloud isn't the perfect match for your studio? Here a trio of indies – and an industry veteran – detail their experiences with the platform, the support Microsoft provides, and all the ways the cloud can power-up the games small studios share with the world, putting your team alongside the development sector's giants

PROFILE: HENRY HOFFMAN, CO-FOUNDER, MUDVARK

Could you tell our readers a little about your studio?
Founded by Dan Da Rocha and myself, Mudvark is a small outfit set up in and around London. We've worked on a few indie games in the past and wanted to try out a new iterative development model. We've started small, but have big dreams for the future.

What was Mudvark's perception of the cloud before your team embraced it?
Whenever I heard people talk about the cloud I'd always just see it as another business buzzword. Imagery of businessmen pointing at the sky, muttering something about group synergy and corporate strategy comes to mind. There was no doubt in our minds that it wasn't relevant to us – in the end, though, it turned out quite the opposite.

What elements of the cloud have you used as a result of Microsoft helping you work with the platform?
We've been using Windows Azure Mobile Services, which provides a user-friendly way to use the cloud on Windows Phone, Windows 8 and iOS. With just a few lines of code we've been able to authenticate users using Facebook, grab their details and then post to leaderboards using their user ID. Using an authentication provider like Facebook means that when they log in on another platform, all their data will be carried across.

What abilities of the cloud have had the most significant impact on your studio?
The peace of mind when it comes to security and scalability is a big one for us. As a small team we don't have the capacity to take on and manage a networking expert, so knowing the security and scalability is handled makes a massive difference.

Finally, what advice would you have for other small studios considering working with Microsoft and the cloud?
I'd say that if you're looking at including anything where data is saved and shared, take a close look at Windows Azure. Rolling your own server-side solution can be time consuming, prone to error and difficult to gauge traffic for your requirements. If looking at building for Windows 8, Windows Phone or iOS then Windows Azure Mobile Services is a great place to start. For other platforms there's a whole bunch of samples and tutorials.
www.mudvark.com

PROFILE: ANDY PAYNE, INDUSTRY VETERAN AND UKIE CHAIR

Who are you and what do you do?
My name is Andy Payne, I have worked in games since 1986 and founded The Producers in 1988, which is still running today as part of the Mastertronic Group, of which I am chair. I am also chair of UK Interactive Entertainment (UKIE) and a member of the BAFTA Games Committee, as well as a founder of games charity GamesAid.

Do you feel smaller studios, indies and the like are too timid in thinking of the cloud as something a little out of their reach?
I know plenty of really smart studios who are weaving the cloud into their strategy and have been for some time. Great asynchronous games need server-based tech, and I do think most games developers will initially seek to solve those problems themselves 'in-house', so to speak. But in order to ensure that the game has true scalability, outsourcing to specialist and cost-effective providers is a path that most games developers will see to be best for them. So start small, but think big and think about who you need to be partnering with in order to help as many players around the world play your game. Ask your friends and other games industry people who they work with. Do your research and make sure if you do make the wrong call, you can change fast. Above all, be decisive.

Why should those smaller teams move to embrace the cloud?
We are seeing technology driving so much change, that it can often be a confusing business. But, as this innovation drives the disruption so infrastructure and investment begin to follow the audience. As more and more games are played across a multitude of devices, and mobile games especially become synchronous, the challenges will just get harder. Get to the cloud as fast as possible. Don't be scared. After all, most of us are using it anyway, whether it be your Google Drive, Dropbox, Facebook or Twitter account, or whatever. But don't load up your company with extra and unnecessary tech clutter. Work with the professionals, but make sure you get a solution that starts low-cost.

It seems the cloud in this context presents a level playing field. Why could that be good for the industry?
Making games is not easy; making fun games is even harder. Making your games known and wanted can be harder still. But distributing the games instantly, anywhere in the world, at any time of day or night, no matter what your size, has never been easier.
www.ukie.info

Democratising the cloud

Want to learn more? Microsoft can help you embrace the cloud, starting right here

Microsoft's support for indies and small teams starts with the BizSpark and DreamSpark programmes, which are detailed below.

Through those initiatives, Microsoft can help you get your business running, get access to professional-level software, and get your games taking advantage of the cloud in all the ways detailed over the previous pages.

CALLING ALL INDIES

And if you're an indie of any kind, you can start at Microsoft's dedicated website for indie game development: **www.ubelly.com/gaming**. Ubelly is the 'unofficial official' Microsoft site for indie games developers. The team at Ubelly cover the events you want to go to, write about the things you want to read about and care about the things you care about. It's your one-stop destination for all things Windows games development.

AZURE MOBILE SERVICES

Still unsure about Windows Azure? Quite simply, with Windows Azure Mobile Services, you can streamline common development tasks like structuring storage, integrating push notifications and configuring user authentication. And that means you can thrust your studio, however small, ahead of the game and into the same limelight in which the giants of triple-A bask.

Windows Azure Mobile Services lets indies make use of social media single sign-on authentication, leaderboards, push notifications and data reporting on the utilisation of their app, meaning game features once only available to huge budgets are now within reach, whether you're making a game for Windows, Android, or even iOS.

For more information email **AzureU@microsoft.com**, or see the bottom of this page for details on trialing the platform.

Here to help

Andrew Webber is Microsoft's UK Audience Marketing Lead for indie games devs, and he can help you make your game idea a reality

What do you do at Microsoft?
My job is brilliantly varied but is basically to talk to anyone about developing games for our platforms – whether Windows 8, Windows Phone or our Windows Azure Cloud platform.

So, is Microsoft all about securing apps in their stores?
Absolutely not. We want to play our part in supporting a vibrant UK games industry. We can do this in a number of different ways – as seen with Dlala Studios, Mudvark and Yippee! Entertainment, who have not only developed game apps for our platforms, but are also now developing cloud-based features in their games. Simply put, we love working with indie studios and helping to establish them. While we can't do this for everyone, I want to find ways that I can use the marketing activity I do to give visibility to studios, app developers and their games.
Contact Andrew at **andrew@microsoft.com**

BizSpark: Get your fast start

- Microsoft BizSpark is a global programme that helps software start-ups succeed by giving them free access to Microsoft development tools

- BizSpark also connects start-ups with key industry players, including investors, and provides marketing visibility to help start-up studios and games industry entrepreneurs

- BizSpark is available to all active developer start-ups that are privately held, in business for less than five years, and bring in less than $1m in annual revenue

- The Microsoft BizSpark programme strives to help young and innovative software companies gain valuable experience and expertise in Microsoft technologies, with no upfront costs

Get involved!

If you think BizSpark could be what you need to get your studio making games that get played, why wait? You can find out all you need at the initiative's official website, and begin the application process.

www.bizspark.com

DreamSpark: Make it a reality

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BUILD

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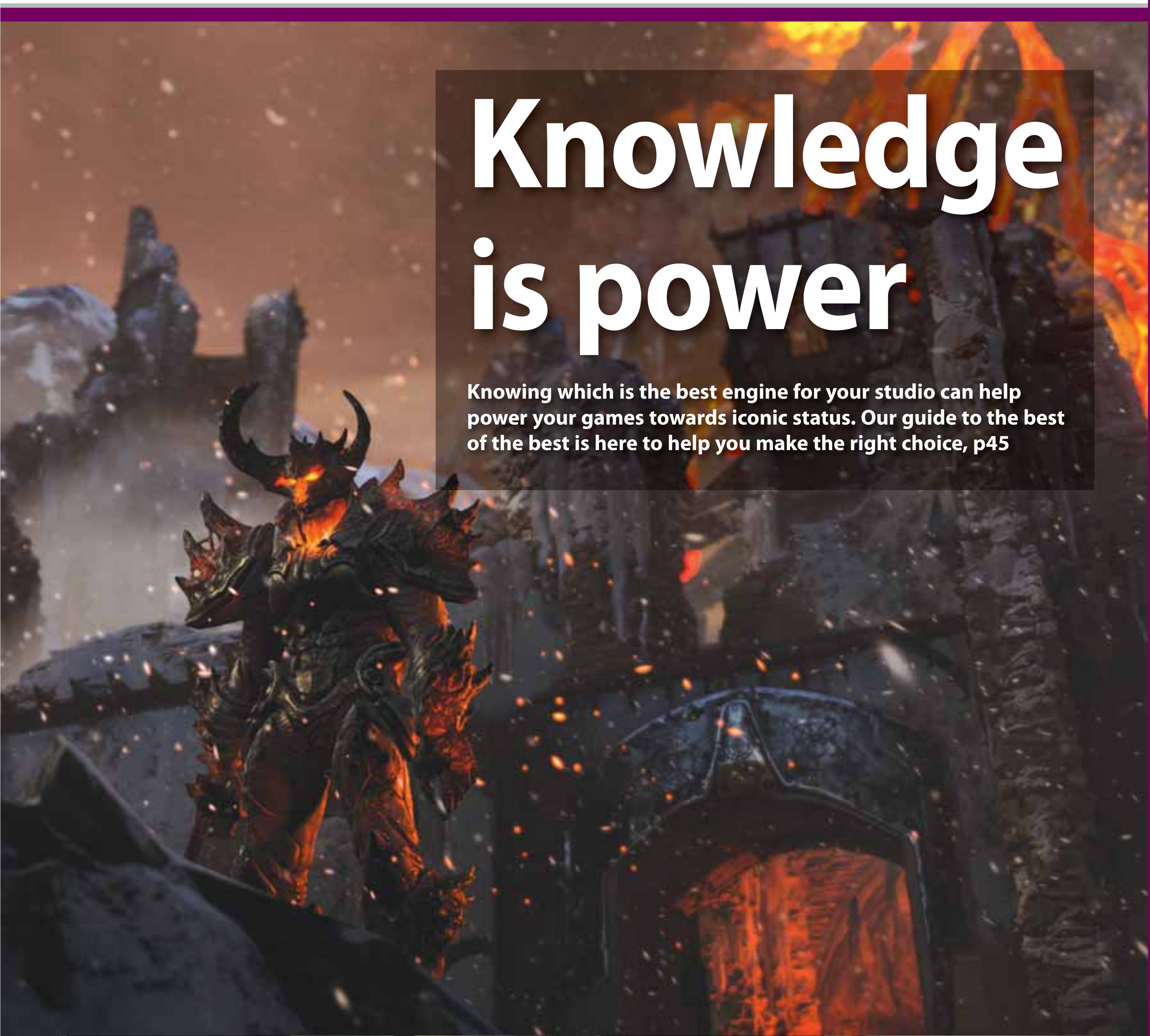
Key Release: Donya Labs' Simplygon 5 p58



Knowledge is power

Knowing which is the best engine for your studio can help power your games towards iconic status. Our guide to the best of the best is here to help you make the right choice, p45

Interview: Rad Game Tools on Bink 2 p54

Heard About: Tomb Raider p64

Ignition systems

As next generation hardware lines up on the starting grid, **Aaron Lee** charts where game engines are going next

SLOWLY BUT SURELY, the next generation of gaming hardware is coming into focus.

But regardless of press conference grandstanding, the next generation starts with you and the tools you have at your disposal. And the most important tool in your arsenal is the game engine.

A year on from *Develop*'s last round-up, the market for external engines has seen further displacement.

Tim Sweeney, founder and CEO of Epic Games, the company behind Unreal Engine, says the industry is going through a generational change led by a revolution in business models.

New instalments of Unreal, Unity and CryEngine are here, and each will doubtless be instrumental in making the next generation a reality, especially in the console space.

However, the myriad of platforms and delivery mediums is cause for concern.

Many of the engine makers we spoke to say platform diversity – or fragmentation – is the biggest challenge facing the sector and its customers.

Part of the answer may in fact come in the form of emerging platforms, such as Ouya and Nvidia Shield, which Marmalade CTO Tim Closs describes as the "missing link" between consoles, mobiles and smart TVs.

Elsewhere, engines built for a single platform are becoming the choice for some, which is demonstrated by the uptake of Windows 8-only engine Rapid2D.

To survive in this fragmenting marketplace, Game Creators CEO Lee Bamber says developers "require a tool that allows them to easily write their app once, then push that content to all profitable platforms".

That same cross-platform mentally is reflected by many in our feature this year. Some have committed to the idea of engines as a service with HTML5 as their foundation, for others the future is about community and some believe its business and support structures, not technical issues, which need to change.

Ultimately, developers need reliable tools to craft the next generation of game experiences. How they go about that is only just becoming clear, but, as Crytek's Carl Jones says: "We are on the cusp of a renaissance in gaming technology."

Tim Sweeny, Epic

Unreal Engine

www.unrealengine.com

Company: Epic Games **Platform (UE4):** Consoles (TBA), PC, PS4
Used in: Gears of War, Infinity Blade, Mass Effect, Dishonored, BioShock Infinite

THE LATEST VERSION of Epic's widely used Unreal Engine is here. Version 4 has been completely redesigned for a new generation of rapid, high-productivity development.

Built as a pure C++ engine with extensive plug-in architecture and a desirable visual toolset, Unreal Engine 4 is built to be adaptable.

"It's an engine that a 300-person team can count on for shipping triple-A projects, and one that a three-person indie development team can depend on for a graphical edge over the competition," offers Epic Games technical director Tim Sweeney. "Unreal Engine 4's code is tighter and more polished than ever before. While the engine is running, you can tweak code, compile it, reload it and debug it for an incredibly tight, interactive style of programming."

The engine's latest additions include a blueprint visual scripting system, a new file and asset management systems to make managing game data more efficient and the Unreal Content Browser to display game assets in an attractive design that is optimised for productivity.

UE3 and UDK are also part of Epic's stable, and together they offer more cost-effective avenues for studios and young developers looking to cut their teeth on industry standard tools. As for UE4, expect to hear more about support for consoles and other platforms at GDC.

"The industry is going through a generational change led by triple-A console gaming, and a revolution in business models led by mobile, PC online and free-to-play games of all sizes, from *Clash of Clans* to *League of Legends*," says Sweeney. "Our mission with the Unreal Engine is to arm developers with tools representing the best of both worlds, enabling triple-A production values on all platforms, and the productivity and flexibility to build games of all sizes and genres."

BlitzTech

www.blitztech.com

Company: Blitz Games Studios **Platform:** 3DS, Android, iOS, Linux, Mac, PC, PS3, PS Vita, Wii, Wii U, Xbox 360
Used in: House of the Dead: Overkill, Rayman Raving Rabbids, Puss in Boots, Kumo Lumo, Vitalize

BLITZTECH'S VERSATILITY IS demonstrated by the platforms it supports and its uses. Maker Blitz Games has used the engine in *Kumo Lumo* on iOS, and the same tech powers its Kinect-enabled rehabilitation aid *Vitalize*.

The engine has a broad set of audiovisual tools, real-time physics, AI and multi-core capabilities to make cross-platform production less gruelling.

Blitz Games technical director Tony Povey says it focuses on quality from the first prototype right through to areas of increasing importance, such as post-launch support, including social features, web services and analytics. This year, it will be switching to an HTML5 interface, adding improved support for different genres and closer integration with the likes of Maya.

"The increase in mobile game and app development is one of the most important trends in game development right now. This is why we have, and will continue to dedicate significant resources to further enhancing BlitzTech's usability in this area," says Povey. "We also see platform diversity and connectivity as two extremely important areas, as owners of existing and new IPs seek to exploit them in every corner of the market."

As games become more interconnected, Blitz is adapting its technology to meet the challenges to come.

"The world has definitely changed a lot in the past few years. The time when sheer pixel-shifting horsepower was the be-all and end-all of game engines has long gone," explains Povey. "Developers need to be far more careful about the middleware they use. Ease of use, platform support and web services are often more valuable to their audience than graphical clout.

"The best solutions gather all of these features together in a single, integrated package, and this sums up our vision of BlitzTech; one of the most complete development pipelines in the world."

CryEngine

www.mycryengine.com

Company: Crytek **Platform:** Next-gen consoles, PC, PS3, Xbox 360
Used in: Crysis, Aion, MechWarrior Online, Sniper: Ghost Warrior 2, Cabal Online 2

CRYTEK'S IN-HOUSE engine has been appearing in a bevy of games lately, not least the developer's own *Crysis 3*, *Warface* and *Ryse*. Suitable for PC, PS3 and Xbox 360, CryEngine 3 is capable of generating state-of-the-art graphics, lighting, physics and AI, as well as having a custom-made sandbox editor. A free version is also available for noncommercial use via its website.

"Essentially, it provides all the tools you need to make your game in real-time, out of the box, which is a huge boost for large and small developers," says CryEngine director Carl Jones.

The biggest challenge as an engine provider, Jones says, is delivering total flexibility for a varied development market.

"As players demand triple-A quality from low-price or free games, developers need technology that can enable them to respond near real-time to such demands in a commercially viable way. So, although it's difficult, this burden to create an engine that is 100 per cent flexible is absolutely necessary. Maintaining this will be the biggest challenge for engine makers, as the number of platforms and game types increases," he says.

CryEngine 3's latest features include improved displacement mapping, particle effects and volumetric fog shadows to name but a few.

Crytek has been developing its engine in a scalable manner in preparation for the next generation, and Jones believes its ready to meet developers' future needs as a result.

"The ultimate goal is really to provide developers with a single interface where they only need to build their game once and not multiple times for each platform," says Jones. "As such, we do not necessarily need to make huge changes to the way we handle new platforms, and we'll be announcing new platform support from CryEngine in the near future."

Carl Jones, Crytek

Tony Povey, Blitz Games

Unity

www.unity3d.com

Company: Unity Technologies **Platform:** Android, Browser, Flash, iOS, Linux, Mac, PC, PS3, Wii U, Xbox 360
Used in: Bad Piggies, Castle Story, Dead Trigger 2, République, Wasteland 2

UNITY NOW CLAIMS to have over 1.5 million registered users and has brought us the likes of *Endless Space*, *Kentucky Route Zero* and *Thomas Was Alone*. Yes, the herald of the indie revolution has gone from strength to strength, and the latest version of its engine brings its mission to democratise development closer still.

Unity 4 has a new animation system, Mecanim, which its maker says brings high-end character animation to those who have previously never had access to such a tool.

Unity CEO David Helgason believes engines today are about community: "The most important innovations in game engines haven't been of a technical nature – they're about building a community and a marketplace around engines, and thus making the engine more than just a piece of software.

"An engine with a big community more resembles a social movement than a software tool, and at Unity, we intend to push the bar on this very hard going forward."

And when it comes to maintaining the Unity community, Helgason says keeping up with "platform fragmentation" can be taxing, but he feels the breadth of support and its strong financial situation means Unity can shine.

Along with existing support for DirectX 11 and Wii U, plans are in place to bring Unity to BlackBerry OS and Windows Phone this year. Support for Oculus Rift is also on way, and the engine maker is keeping an eye on the likes of Ouya and Nvidia as they bring their Android platforms to market.

And other consoles may yet be on its list, as Helgason says: "We are currently researching the other next-gen consoles while having open communications with their makers. We're committed to giving our community the best publishing options possible to open up as many avenues for success as we can."

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Dag Frommhold, Havok

Havok Vision Engine

www.havok.com

Company: Havok **Platform:** Android, iOS, Linux, Mac, PC, PS3, PS Vita, Wii, Wii U, Windows Phone, Xbox 360
Used in: Arcania: Gothic 4, Carnival Island, Orcs Must Die!, The Settlers 7, Soul Worker

EIGHTEEN MONTHS SINCE its acquisition by Havok, the Vision Engine has been the foundation for many RTS games and MMOs.

The engine is designed with a focus on flexibility and modularity. Its C++ API allows new features and modules to be added without modifying the engine's source code. Vision Engine principal engineer Dag Frommhold believes that developers want an engine that initially allows them to get their game up and running as quickly and efficiently as possible, and then, later on, one that doesn't limit their creativity.

"Providing a flexible, easily extensible game engine that fits into any development pipeline is vital, as is minimising turnaround times for both artists and programmers," he says.

Frommhold isn't surprised by the demand for cross-platform game engines on mobile platforms. Indeed, the engine's last update included many enhancements for mobile development, including Visual Studio integration for Android, new file serving and rendering solutions to reduce iteration times. What's more, the Vision Engine codebase has also been restructured to match that of all other Havok products, which improves the workflow when using it in conjunction with other Havok middleware.

Recently, an asset management solution was added to its editor, and the engine maker will be sharing more at GDC.

With hardware ecosystems constantly changing, Frommhold says that engine developers need to anticipate these shifts and help game studios adapt.

"Professional middleware offerings provide game studios with a lot of additional flexibility – for example, by facilitating ports to new platforms – and can help them get their game up faster than with an in-house solution. I think this added freedom and efficiency can have a very positive impact on the quality and cost-effectiveness of games development."

BigWorld

www.bigworldtech.com

Company: Wargaming **Platform:** Browser, PC
Used in: World of Tanks, Grandia Online, Heroes: Scions of Phoenix, Moego, Realm of the Titans

SOLID USER CLIENT and state-of-the-art backend are what attracted attention to BigWorld Technology, says Wargaming, the fast-moving online games company which purchased the middleware provider last year.

BigWorld is built to support MMOs. Currently, it can be used to create PC and browser games, though interoperability for other platforms is planned.

The BigWorld engine famously powers Wargaming's runaway hit *World of Tanks*, and is now being used to build spin-offs, *World of Warplanes* and *World of Warships*.

"The engine's architecture takes a lot of complexity out of building a multiplayer game, which allows games designers to get assets into the game quickly. It's the reason why BigWorld has been used by small indie teams, all the way up to professional games developers that support millions of players," says Wargaming's lead client programmer Martin Slater.

Providing new features while supporting a range of developers can be tough, says Slater. So it is imperative, he says, to prevent cases where solving technical issues damages core gameplay.

"Supporting a diverse set of platforms, minimising development costs and optimising production time are key challenges in engine development today. Each platform requires significant technical changes, not to mention major gameplay adjustments," Slater explains.

BigWorld is available to licence for commercial projects or indie ones, and support for the ever-growing range of connected devices is also planned.

"The bottom line for customers is an outstanding graphical experience that runs on the hardware they already own. It is very commonplace for games – especially triple-A titles – to require increasingly powerful and expensive hardware," says Slater. "We take pride in delivering games that work on a wide range of machines, be it a high-end gaming PC or an average laptop."

Martin Slater, Wargaming

Tim Cross, Marmalade

Marmalade

www.madewithmarmalade.com

Company: Marmalade **Platform:** Android, BlackBerry OS, iOS, Mac, PC, Smart TVs, Windows Phone
Used in: Call of Duty: Black Ops – Zombies, Cut the Rope, Draw Something, Pro Evolution Soccer, Talisman

MARMALADE HAS BLOSSOMED into a trusted SDK for cross-platform development. It allows developers to use C++, Lua or HTML5, while working entirely within a Windows or Mac environment. Its main selling point is the ability to deploy from a single codebase to a wide range of mobile platforms, desktops and selected smart TVs.

Marmalade also welcomes third-party extensions and open source components, which can be produced in C++ and OpenGL ES.

Marmalade CTO Tim Closs is excited about the latest iteration of the SDK, Marmalade Quick, an open RAD programming environment for developers who wish to code in Lua rather than C++ and still take advantage of its cross-platform functionality.

"It sits on top of Cocos2d-x, Box2D and other best in class open source components, but adds really high-level Lua APIs that let developers achieve an awful lot with very few lines of code," explains Closs.

Marmalade has been comparatively swift when it comes to catering to small developers that are looking to get noticed by targeting the less-established platforms such as BlackBerry and Windows Phone. And it has made sizeable gains as a result, with Marmalade users on BlackBerry increasing to 24 per cent in January, compared to fewer than three per cent last August.

"We're looking at a mobile landscape that is becoming incredibly fragmented, and it looks like 2013 is going to be the year when consoles and handhelds start to do the same. In that kind of environment, we want to make cross-platform development as easy as possible, allowing developers to create amazing experiences regardless of the device they're targeting," says Closs. "In a way, our challenges are the ones developers pass on to us. Right now, the biggest issue for developers is how to monetise mobile apps, and we're looking to do more with Marmalade to help."

▶

Gabriel Liberty, Gamebase

Gamebryo

www.gamebryo.com

Company: Gamebase USA **Platform:** Android, iOS, PC, PS3, Wii, Wii U, Xbox 360
Used in: Catherine, El Shaddai, Epic Mickey, Rocksmith, Warhammer Online: Age of Reckoning

GAMEBRYO AIMS TO give developers the means to develop for as many platforms as possible using a single codebase. The engine was redesigned over the last two years to make it more efficient. It now supports more platforms, including the Wii U, and its creator, Gamebase, says its improvements have made the engine simpler and smarter to use in production pipelines.

Some of those tweaks include a simplified distribution method, where new installers can be generated and published within hours, a more supple code structure that no longer requires system environment variables or an SDK directory and an automated build and test system, which offers a basic level of quality assurance.

Beyond jumping into development and 'buying expertise', technical director Gabriel Liberty believes developers are looking for external engines to solve many of the problems that plague games development.

"This includes the bottleneck of content. How an engine deals with getting art from Max and Maya and putting it into a game is crucial," he explains.

Gamebase says its restructuring has future-proofed its engine. But the challenge engine makers face, says Liberty, is competing with internal technology. That's why Gamebase has put swift and responsive tech support at the forefront to keep its users happy.

"Every game engine has problems. Every piece of software has problems. The difference between many is how fast you can resolve them. Internal tech can solve the problem very quickly, as quickly as an artist walking down the hallway to the programmer and it being fixed in the next version; typically the following day. Using Gamebryo, the artist sends an email to our tech support and it is fixed in the next version, typically the following day."

Shiva

www.shivaengine.com

Company: Stonetrip **Platform:** Android, BlackBerry OS, Browser, Flash, iOS, Linux, Mac, PC, PS3, Wii, Windows Phone, Xbox 360 **Used in:** Babel Rising, Non Flying Soldiers

SHIVA'S SLOGAN IS 'develop once, publish everywhere'.

Produced by French studio Stonetrip, this engine supports over 16 platforms and has gained a reputation among small studios and bedroom coders.

Support for the Windows Store was recently added, which also necessitated a fit for DirectX 11. Shiva can now be used to bring titles to Windows 8, RT and Windows Phone.

"We offer a very robust, powerful and scalable game engine that runs on basically everything, from current generation consoles, web browsers, mobile phones and tablets to powerful desktop gaming computers, delivering you the best possible performance on your target device," says Stonetrip CTO Nicolas Peri.

Testing is something many of the engine makers in this year's feature point to as an ongoing issue. Shiva is no different.

"We stopped counting how often a new iOS or Xcode update broke games that were working flawlessly with previous releases. But we are committed to keeping our engine up to date, so we release fixes and updates regularly," says Peri.

Stonetrip's approach to cross-platform development is to avoid discrimination.

"We do not believe that there are some platforms that are more important than others. Our customers report far better sales on less crowded app stores, such as Amazon Kindle, Barnes & Noble and BlackBerry, while the commonly perceived 'popular' ones, such as iOS and Android, hardly bring back in the development costs – the indie app gold rush on these platforms seems to be long over."

Right now, Stonetrip is focused on its next major editor release, which will contain a faster particle system, an improved physics engine, custom shader and HUD editors and a new user interface, among other things.

Nicolas Peri, Stonetrip

Mark Randel, Terminal Reality

Infernal Engine

www.infernalengine.com

Company: Terminal Reality **Platform:** 3DS, Android, iOS, Linux, Mac, PC, PS3, PS Vita, Wii U, Xbox 360
Used in: Ghostbusters: The Video Games, Kinect Star Wars, The Walking Dead: Survival Instinct

THE INFERNAL ENGINE is a complete solution for developers, offering native physics, AI, pathfinding, sound, material shader generation, Flash UI and networking, claims its maker Terminal Reality.

Infernal was made with cross-platform development in mind, starting with its WYSIWYG editor, which allows users to develop on their PC with emulation for supported platforms and fluid testing. Terminal Reality says this makes for quick turnaround and rapid prototyping during production.

"We're seeing a rising demand for lower costs, easy-to-use tech with multiple platform support," says Terminal Reality president and CTO Mark Randel. "As a mid-tier independent developer, reacting to major changes within the industry landscape has been challenging. In response, we're becoming far more agile and responsive, both to external changes and within our internal project development strategies and pipelines."

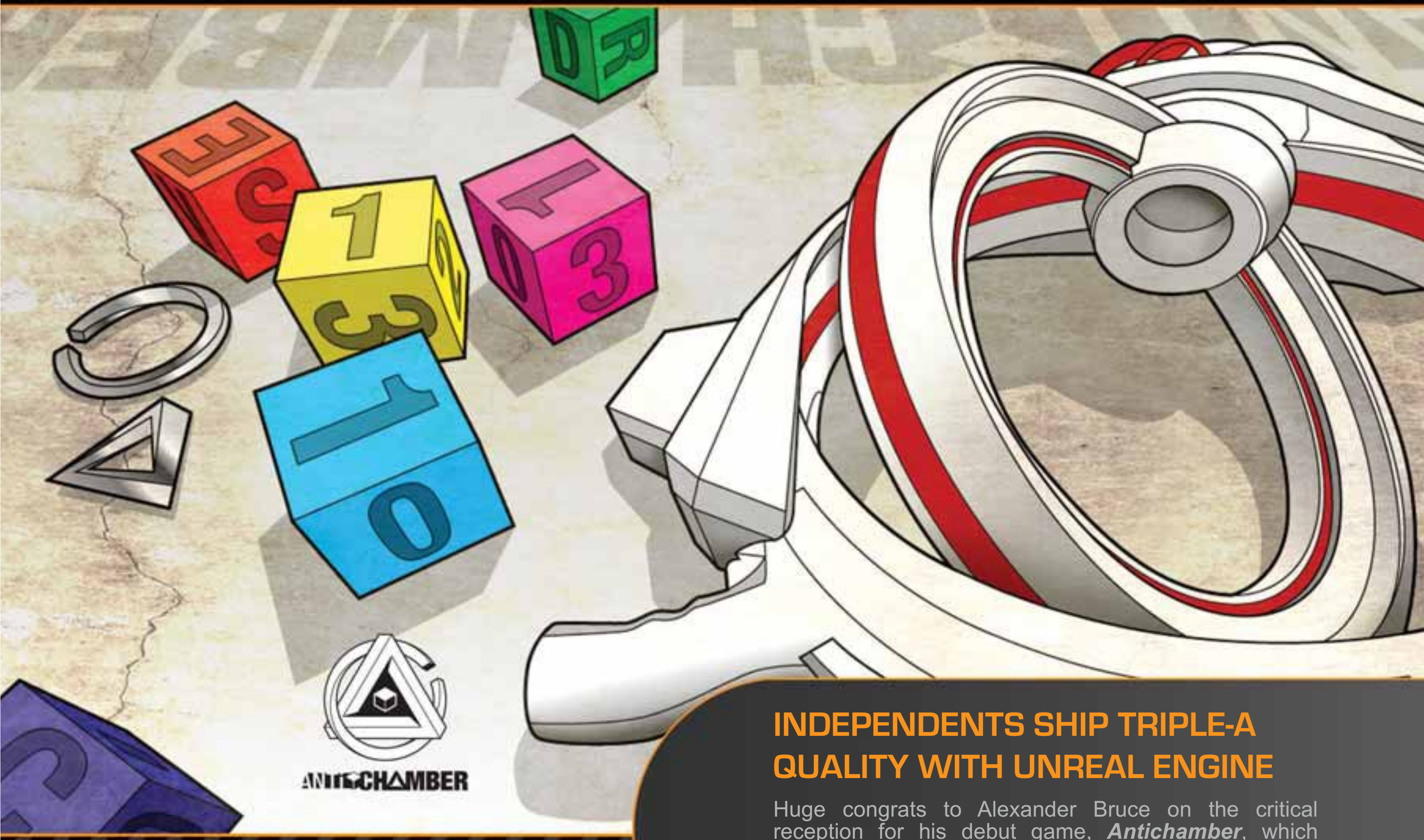
Terminal Reality has updated the engine's client-server networking, asynchronous multiplayer and iOS push notification support. Super-high-resolution radiosity lightmapping for consoles with 4GB-plus RAM and cinematic-quality anti-aliasing have also been added.

These additions are part of Terminal's push to keep its engine current, and Randel thinks it is ready to tackle the current shifts in technology.

"We're at the cusp of a new console generation, and so you see game engines poised to take advantage of another exponential increase in hardware performance and capabilities. The mobile space is rapidly evolving, adding focus to greater connectivity and social aspects of technology across all platforms."

"We feel that the breadth of our experience across PC, consoles and mobile devices will allow us to continue to expand our support in new technologies."

UNREAL ENGINE NEWS



INDEPENDENTS SHIP TRIPLE-A QUALITY WITH UNREAL ENGINE

Huge congrats to Alexander Bruce on the critical reception for his debut game, ***Antichamber***, which instantly topped Steam charts. Built and shipped using the **Unreal Development Kit (UDK)**, the free edition of Unreal Engine 3, ***Antichamber*** has won more than 25 awards, including the coveted prize for Technical Excellence at the 2012 Independent Games Festival.

Come talk with Epic at the **Game Developers Conference**! We will be hosting indie drop-in hours at our expo suite, **North Hall #BS322**.

Please check **unrealengine.com** or **facebook.com/unrealengine** for further details.

Those interested in making an appointment are invited to email **licensing@epicgames.com**.

GDC 13

MAKE
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Our game development competition, Make Something Unreal Live, will be back at the Gadget Show Live consumer show in April 2013. Student teams working with UDK will rapidly build new PC experiences around the theme of "Mendelian inheritance: genetics and genomics." Thanks to our MSUL 2013 partners, the Wellcome Trust and Staffordshire University, as well as mentor studios: Climax Studios, Lucid Games, Ninja Theory and Splash Damage.

Don't forget! It's always been free to use UDK until you're ready to deploy a commercial product for PC, Mac or iOS. Even after the one-time $99 studio fee, Epic doesn't take a royalty until you pocket $50,000.

EPIC GAMES

Come see Epic at upcoming industry events: **Game Developers Conference** (March 25-29, San Francisco, CA), **Gadget Show Live** (April 2-7, Birmingham, UK), **East Coast Game Conference** (April 24-25, Raleigh, NC)
Email licensing@epicgames.com for appointments and sign up for our newsletter at unrealengine.com.

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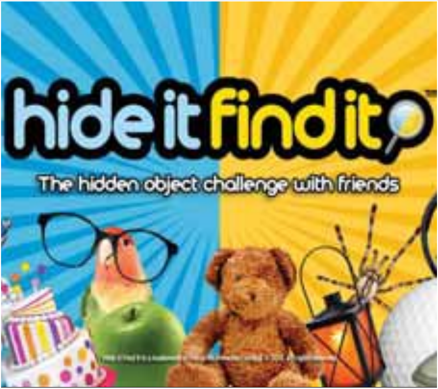
Lee Bamber, Game Creators



hide it find it
The hidden object challenge with friends

App Game Kit

www.appgamekit.com

Company: The Game Creators **Platform:** Android, iOS, Mac, PC
Used in: Cannon Ball, Hide It Find It, Jumping Jack

APP GAME KIT is a cross-platform programming language which operates in BASIC or C++. By offering coders the means to write in open scripts, results can be created in minutes or customised to very specific needs.

The engine's primary user base tends to be hobbyists. The Game Creators CEO Lee Bamber says they have built an enthusiastic forum community around AGK.

"Fragmentation is on the rise, and a modern engine must cater for multiple platforms and form factors as they emerge," he says.

Bamber's plans to add an advanced debugger, improved IDE features and more robust help.

He adds: "One of the biggest challenges is figuring out what the next big platform or form factor will be, and planning development to anticipate the inevitable demand from coders.

"We practically live on the cutting edge, and at this very moment we are looking at perceptual computing, virtual reality, variations on the Ultrabook and tablet themes, smart TVs and micro-consoles. Who knows what 2014 will bring?"

Cooper Buckingham, Idea Fabrik

HeroEngine

www.heroengine.com

Company: Idea Fabrik **Platform:** PC
Used in: Star Wars: The Old Republic

IDEA FABRIK'S HEROENGINE is an integrated client and server platform for developing MMOs and virtual worlds. Its customers include the likes of EA and Above & Beyond.

At the end of 2012, HeroEngine 2 arrived. It has more emphasis on graphics, HDR rendering and customisable shaders.

HeroEngine aims to take care of the most frustrating aspects of developing an online game by building a client-server platform that integrates the core networking systems into a single, unified game creation and editing environment.

Idea Fabrik's director of business development Cooper Buckingham says the key issue with mobile and console vendors rests with their own operational infrastructure.

And it's because of this that he claims the challenges for his company aren't technical, but business related.

"Mobile and console platforms don't typically have a good business model around the requirements of connected MMOs you find on the desktop with Windows or Mac. That leads to very few MMO games on those platforms," he says.

David Fletcher, Rapid2D

Rapid2D

www.rapid2d.com

Company: Rapid2D **Platform:** PC
Used in: Keep Calm and Kill Aliens, London Breaker, Royal Pigeon

RAPID2D IS THE youngest engine in our round-up, having launched just four months ago. It is specifically designed for the production of games and apps for Windows 8.

Code is produced in C++, while the engine's UI makes it easy to use for both novice and experienced developers. It's capable of generating a whole Visual Studio project, with classes for any objects required, thereby speeding up the development time; and all this while allowing multiple developers to work on the same project. Pro and intermediate versions are due out in the first quarter of 2013, with development facilities for Windows Phone, a microtransaction system, as well as other features.

"Users are increasingly playing more casual games, and therefore the market for development of these games, which are inherently 2D, has increased," explains Rapid2D lead programmer David Fletcher. "Developers need to find different ways of generating income; doing this via microtransactions can be very profitable, and is an avenue which developers are increasingly looking to."

Russell Kay, YoYo Games

GameMaker

www.yoyogames.com

Company: YoYo Games **Platform:** Android, Browser, iOS, Mac, PC, Windows Phone **Used in:** Hotline Miami, Mr Karoshi, Reflexions, Spelunky

POSSIBLY THE ENGINE with the lowest entry requirements in this year's round-up, GameMaker was created with people looking to get into games development in mind.

YoYo Games CTO Russell Kay says GameMaker's greatest strengths are its simplicity and accessibility, rapid prototyping and integration with multiple monetisation solutions.

Today, GameMaker comes in four flavours – a free version and tiered paid-for versions – and supports a spread of platforms including Windows 8, Mac OS X, iOS, Android, Windows Phone, HTML5 and more.

In order to open up further opportunities for developers, YoYo Games plans to support Ubuntu Linux, GPU vertex and fragment shaders and a new native compiler based on the LLVM library.

"We are seeing a greater acceptance among developers of the utility of game engines and a willingness to use tools that are not created in-house," says Kay.

"This dynamic brings more creative energy to the surface in game design and business models. We are all looking forward to see what our customers do with our product next."

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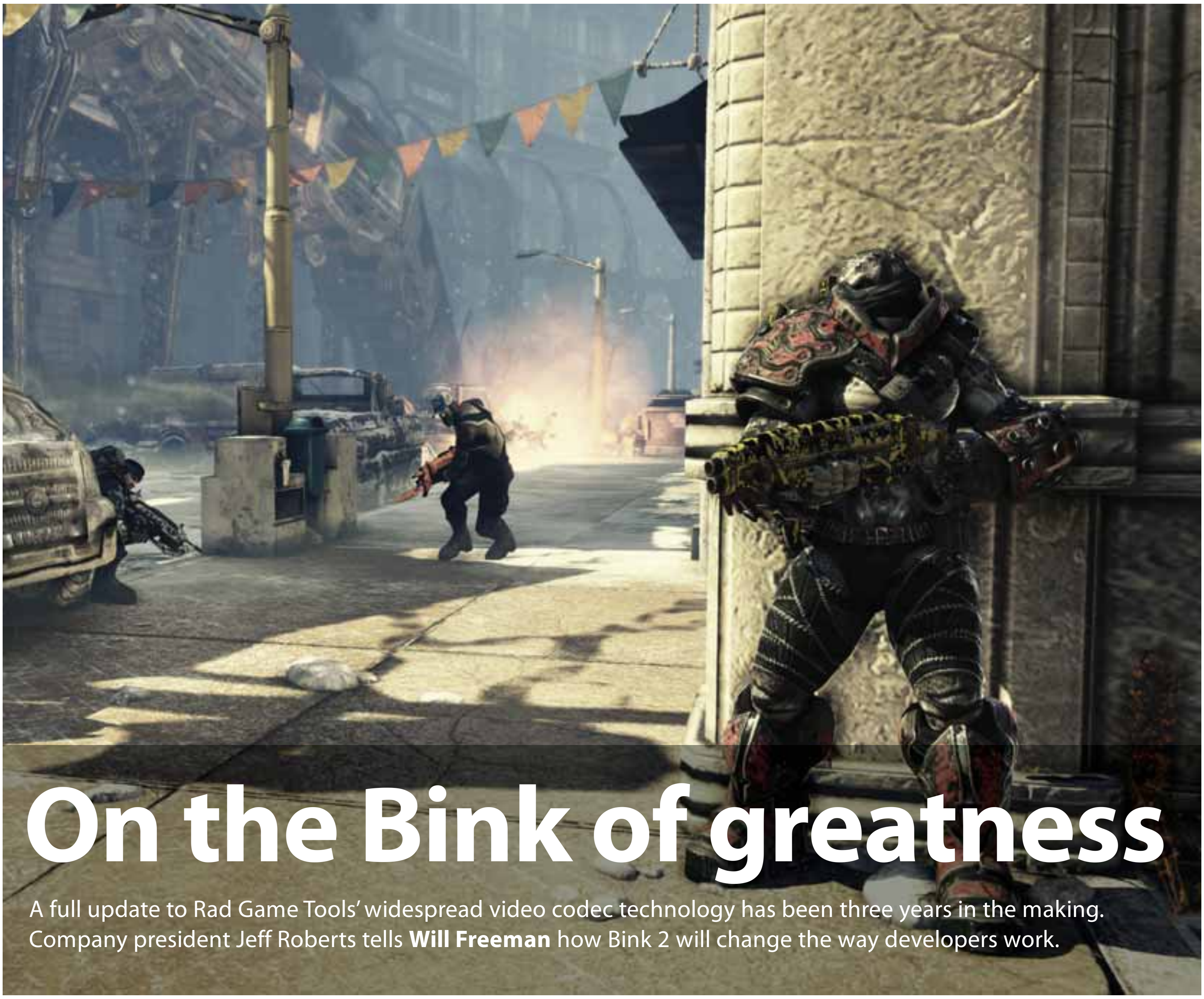


On the Bink of greatness

A full update to Rad Game Tools' widespread video codec technology has been three years in the making. Company president Jeff Roberts tells **Will Freeman** how Bink 2 will change the way developers work.

Gears of War 3, which used an early version of Bink 2 as part of the video codec technology's development

BEFORE WE TACKLE the intricacies of Bink 2 specifically, why do you think Bink has become such a standard in the realm of video codec for games? What is its appeal?
I think it's a combination of things. The API is the right way to play video, so it's not only easy to integrate, but easy to do crazy stuff with – like compressed textures or whatever. We like to say it feels like a codec that you wrote yourself.

But there are lots of other things that make it nice for games – it's super fast, it's self-contained in that you don't need any other frameworks, and it's super easy to licence.

And is there an overall theme or direction that shaped the way you designed and developed Bink 2?
Yes. The big direction in Bink to was to design a codec that is what I like to call 'natively SIMD'. Nowadays, even my phone has powerful SIMD instructions, so we tried to build a codec that was built around this capability, instead of tacked on as an optimisation pass later.

One example would be that the pixel blocks themselves are swizzled inside Bink 2, so that we can decode multiple neighboring DCT blocks simultaneously, without having to re-arrange the data in any way first.

Nicely, this not only gets you the 'SIMD-ification', but also allows you to convert way more code into SIMD, since you aren't converting or optimising an algorithm. Instead, you are just converting data types. As an example, our iDCT looks like a normal scalar iDCT – it just operates on SIMD data types instead of scalar ones.

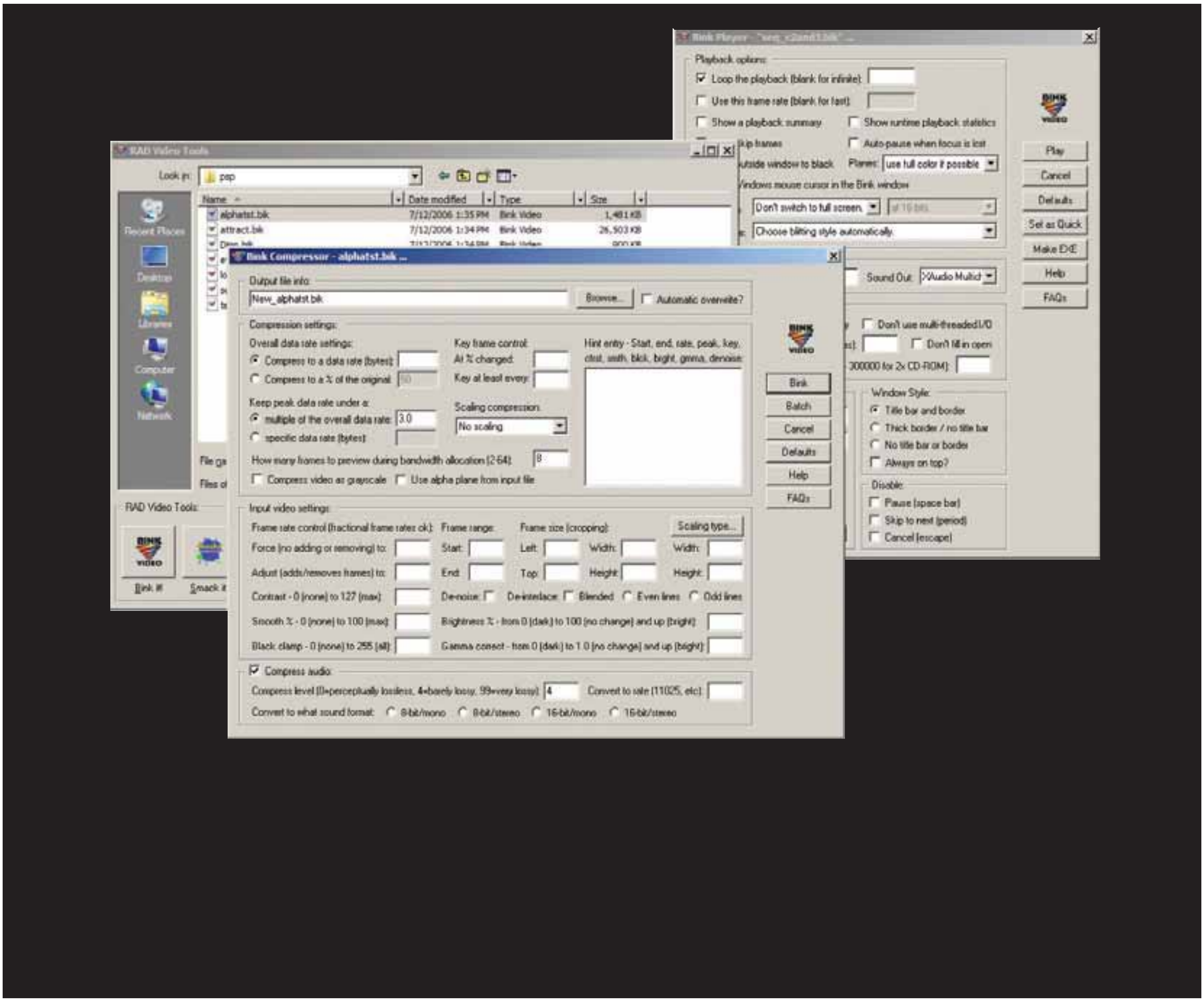
> ***"The big thing is that developers can now use larger videos and stay on the 60 Hz path. Bink 2 won't be the blocking factor."***
>
> Jeff Roberts, Rad Game Tools

The other big design goal was a video codec that could be pixel shader/computer shader accelerated. This will be coming over the next year – I'm really excited about it. Maybe we can talk again in six months.

Looking at the numbers Bink 2 is remarkably powerful compared to its predecessor. How will that impact the developers that use it?
Well, obviously, you are going to have much nicer looking video. But I think the bigger impact is going to be much higher video resolution. The new high-pixel density displays on PCs and Macs, and 3D video on the consoles are all going to demand a lot more pixels running through your video path.

Why was now the right time for a full update to Bink?
Well, we started about three years ago and really cranked on it through 2012 – the big thing that we wanted to be ready for was the next generation of consoles and tablets. Lots of pixels, lots of SIMD, lots of GPU – we wanted to take advantage of all of it.

Bink 2 was written with an SIMD design. What does that mean in terms of the impact it will have on games developers embracing Bink 2?
It should all be invisible to them technology-wise. Market share-wise, it shouldn't have a big impact either. Certainly on the PC side,



Name	Date modified	Type	Size
alphatst.bik	7/12/2006 1:35 PM	Bink Video	1,481 KB
attract.bik	7/12/2006 1:34 PM	Bink Video	26,503 KB

Output file info: New_alphatst.bik
☐ Automatic overwrite?

Compression settings:
Overall data rate settings:
● Compress to a data rate (bytes):
○ Compress to a % of the original: 50
Key frame control:
At % changed:
Key at least every:
Hint entry - Start, end, rate, peak, key, clrst, smth, blck, bright, gmma, denoise:
Keep peak data rate under a:
● multiple of the overall data rate: 3.0
○ specific data rate (bytes):
Scaling compression: No scaling
How many frames to preview during bandwidth allocation (2-64): 8
☐ Compress video as grayscale ☐ Use alpha plane from input file

Input video settings:
Frame rate control (fractional frame rates ok):
Force (no adding or removing) to:
Adjust (adds/removes frames) to:
Frame range: Start: End:
Frame size (cropping): Left: Top: Width: Height:
Width: Height:
Contrast - 0 (none) to 127 (max):
De-noise: ☐ De-interlace: ☐ Blended ○ Even lines ○ Odd lines
Smooth % - 0 (none) to 100 (max):
Brightness % - from 0 (dark) to 100 (no change) and up (bright):
Black clamp - 0 (none) to 255 (all):
Gamma correct - from 0 (dark) to 1.0 (no change) and up (bright):

☑ Compress audio:
Compress level (0=perceptually lossless, 4=barely lossy, 99=very lossy): 4
Convert to rate (11025, etc):
Convert to what sound format: ○ 8-bit/mono ○ 8-bit/stereo ○ 16-bit/mono ○ 16-bit/stereo

Playback options:
☑ Loop the playback (blank for infinite):
☐ Use this frame rate (blank for fast):
☐ Show a playback summary ☐ Show runtime playback statistics
kip frames ☐ Auto-pause when focus is lost
utside window to black Planes: use full color if possible
indows mouse cursor in the Bink window
Don't switch to full screen.
Choose blitting style automatically.
Sound Out: XAudio Multich
☐ Don't use multi-threaded I/O
☐ Don't fill in open
300000 for 2x CD-ROM):
Window Style:
● Title bar and border
○ Thick border / no title bar
○ No title bar or border
☐ Always on top?
Disable:
☐ Pause (space bar)
☐ Skip to next (period)
☐ Cancel (escape)

Bink 2 and its compressor (above) are ready for the new generation of consoles and tablets, says its creator

non-SIMD CPUs are pretty much non-existent nowadays. The early non-Neon iOS devices are somewhat of a bother, but most modern games don't target them anyway, since they don't have pixel shaders. There is one new console that has no SIMD, but it has a great GPU, so we'll be able to use that.

Bink is famously fast and cheap on memory. How have you improved those attributes?
Memory use is the same as Bink 1 – one frame to decode into and one frame to motion compensate from. That compares to modern codecs that use up to 16 frames for mo-comp-ing. We actually would get a minor quality win by adding more frames, but in the end, we decided memory was just too valuable.

Bink 2 is usually two-to-three times faster than Bink 1, and in some extreme cases, up to eight times faster. This is just due to the fuller SIMD utilisation and our two core load balancing; Bink 1 was unbalanced – one CPU was usually much busier than the second.

What about Bink's audio abilities? How have they been expanded for Bink 2?
Bink's audio is the same for Bink 2 – multi-track, multilingual, 8-to-1 audio, etcetera.

Why is Bink's two-core scaling particularly significant, again, from an end user point of view?
Well, the big thing is that developers can now use larger videos and stay on the 60 Hz path. Bink 2 won't be the blocking factor even with high resolution and/or 3D video.

Users who find themselves having to push Bink 2 in favour of smaller file sizes are told they will find their images blur rather than become blocky. Could you give us a little more detail on the potential of the Bink 2 deblocker?
The Bink 2 deblocker is designed specifically for Bink's encoder. So we use a lot of information about each block to determine how much to blur – or how much not to blur – to its neighbours.

If you are lightly compressed, then it barely runs at all.

If you are highly compressed, then it blurs through each block boundary, smoothing each edge. So, perhaps if you are highly constrained – say, on something like the DVD of an Xbox 360 – then you are able to turn up the compressor without introducing blocks.

How multiplatform do you foresee Bink 2 becoming over time?
Right now, we're on anything x86 or x64, PowerPC and Neon. That's all of our existing platforms.

One of the technologies we built for Bink 2 was a SIMD code generator, so that we can render the source code for different SIMD instruction sets without having to write it all by hand.

Basically, what we do is write the algorithms in a scalar high-level fashion, and then generate the raw SIMD code for the various CPUs. This will let us jump to new instruction sets quickly.

Has any of the design of Bink 2 been implemented as a response to a changing games industry and the rise of the smaller studio? If so, how have you made Bink more accessible to such companies?
Not really. We've always worked with smaller teams on our licensing – we always try to find a licensing scheme that will work. ■

Rad Game Tools has already made Bink 2 available. For more information visit:
www.radgametools.com

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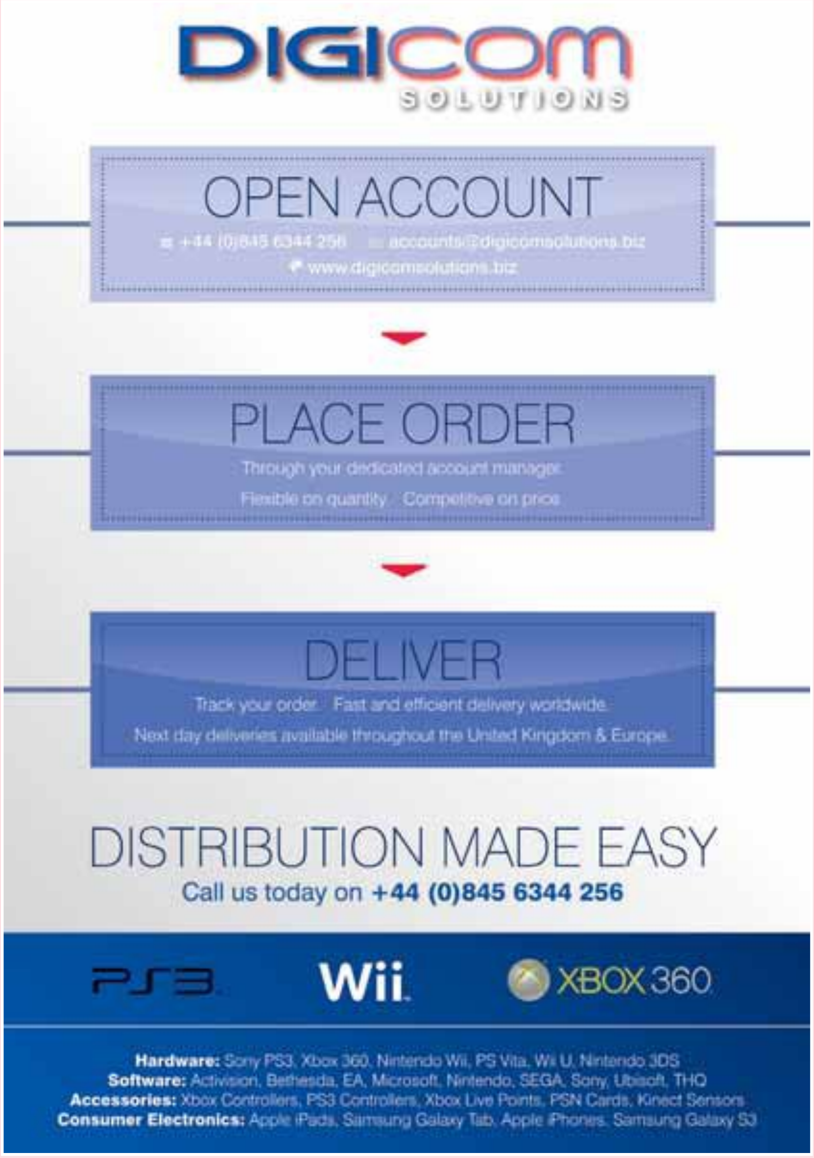

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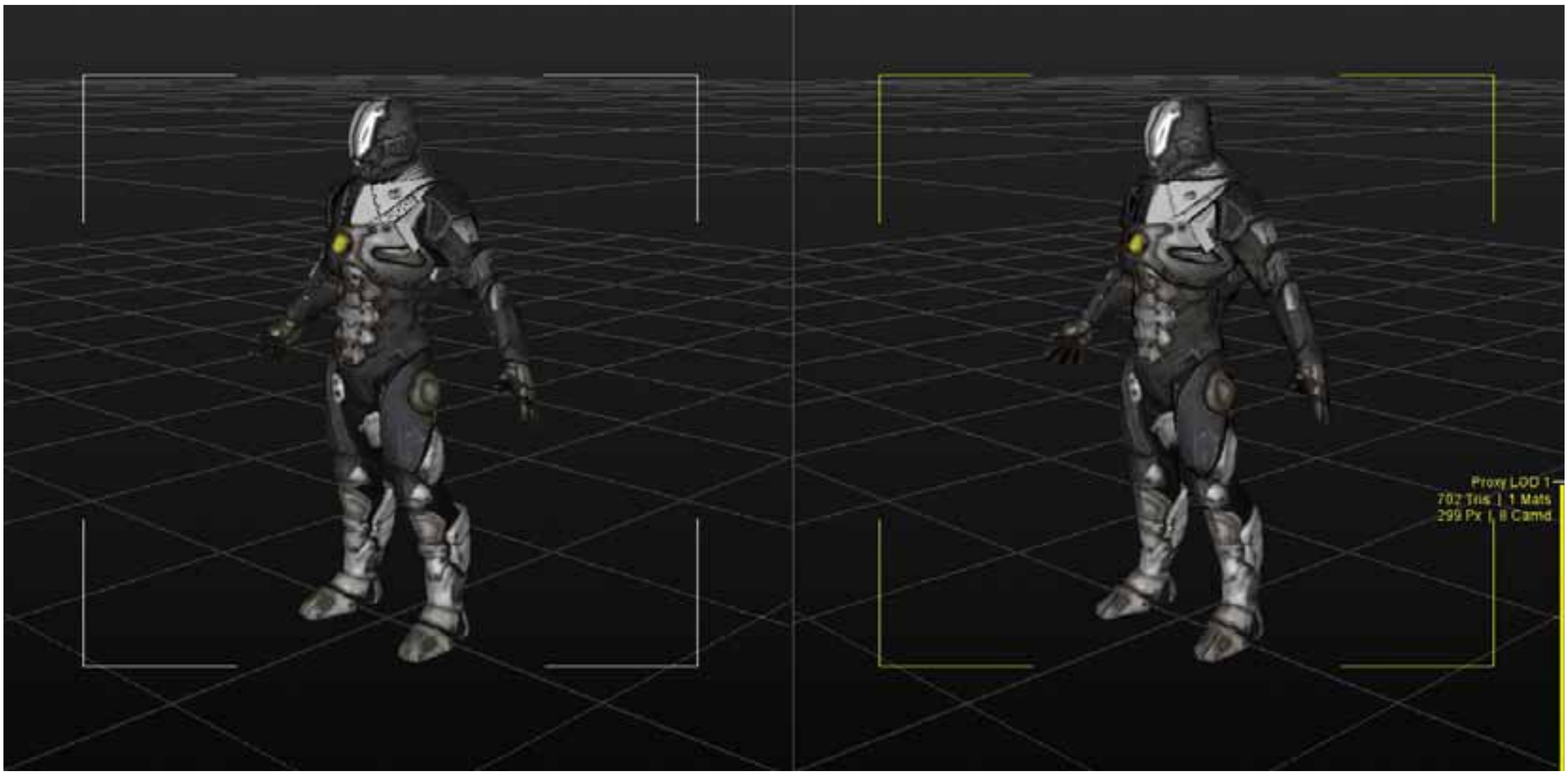
KEY RELEASE

Will Freeman takes a look at Donya Labs' updated tool-chain middleware

WHAT IS IT?
Simplygon 5 is the latest tool-chain middleware for automatic optimisation of 3D game content and 'level of detail'
www.simplygon.com



Simplygon 5 in action (main image), which will save graphics artists investing huge effort, says Donya Labs CTO Ulrik Lindahl (above)

PART OF THE secret to the success of the long running series of Simplygon tools is the technology's specialisation.

Put simply, Simplygon is a software solution that automatically optimises 3D data, all the time focusing on high quality output. The tech, created buy Swedish outfit Donya Labs, is typically used for creating 'level of detail' – or LODs – for games. But it is also designed to allow for optimising assets in titles that don't use LODs, 'crunching' models from high-polygon forms into game-ready assets, and for porting game assets to lower-end platforms.

And now Simplygon 5 is here, designed to better simplify the optimisation process.

"We basically want Simplygon to do the job that graphics artists hate to do," explains Donya Labs CTO Ulrik Lindahl of the new version. "A lot of our new ideas come from talking to artists at game studios to find out how to improve their daily work by removing tedious and time-consuming tasks like manual LOD creation."

PLATFORM JUMPING

Conversing with those developers made one thing clear; embracing an increasingly multiplatform world is a key challenge for games makers, meaning Lindahl and his team have placed an emphasis on developing Simplygon 5 to best serve as many destination platforms as possible.

Today there exists a far broader variety of machines on which studios want to run the same content, and that means even more effort is needed in easing the work life of graphic artists. And there's also the none-too-small matter of the dawn of the new generation to consider.

In that context, Simplygon 5 can be used to target all manner of devices, from high-end PCs to mobiles, with a level of automation the team behind the tech believe is previously unseen.

There's also been a significant effort by Donya Labs in bettering the quality of the meshes optimised by the tool, again with a view to support the increasingly multiplatform games development landscape.

"One important thing we have been focusing on is improving the quality of the resulting optimised meshes even further," elaborates Lindahl. "Because of that, we have invested a lot of time in making the system 'self-aware' – you can insert a Skynet joke here – in that it is able to actually see the result of the processing, and make a decision if the result is good enough. If it deems the quality subpar, it can make improvements automatically, and feed that into a second run. The point, of course, is to make the optimisation process as automatic as possible, with as little artist involvement as possible."

> ***"One important thing we have been focusing on is improving the quality of the resulting optimised meshes even further."***
>
> Ulrik Lindahl, Donya Labs

It's an upgrade that will certainly lessen the load for studios hoping to see their game across mobile, console and other devices, and a substantial boon for Simplygon users.

THE FIFTH'S ELEMENTS

Beyond the improvements to the core Simplygon offering, the fifth full update to the middleware also includes numerous enhancements to the tech's SDK, including several upgrades to its plug-ins and GUI.

"The GUI now has multiple comparison modes, where you can compare the LODs to the original, and we have also added possibilities to mark vital areas that are extra important to keep," says Lindahl. "These semi-automatic edit modes work very well with the fully automated visioning systems to make even higher quality optimised meshes."

Furthermore, while Simplygon 5 and its SDK are designed to serve the largest studios and high-budget projects, Donya Labs is constantly working on making the tool available for more projects and to wider audiences. A collaboration with Epic Games, for example, has been established through the studio's Integrated Partners Program, meaning UDK users already have access to Simplygon 4 for free.

"We definitely plan to continue this with Simplygon 5 and UE4, to really be able to cater to the needs of smaller studios," states Lindahl. "We are also working on new ways to deliver Simplygon. Our goal is to make it an option for everyone – from high-budgets all the way down to smaller teams and indies."

A range of Simplygon licensing options are available, from per-game versions tailored for different models, such as MMOs or mobile titles, to a special deal for prototyping. Elsewhere a non-gaming licence exists. For those interested in embracing Simplygon for the first time, a 30-day free evaluation trial is available via the company's website or through sales@simplygon.com.

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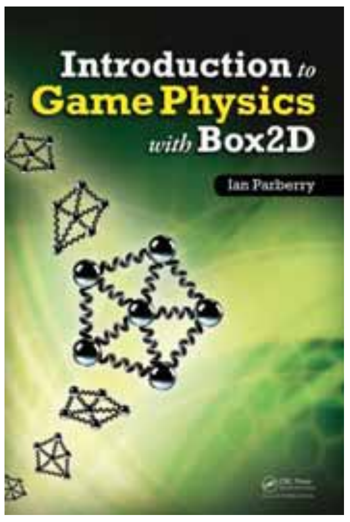
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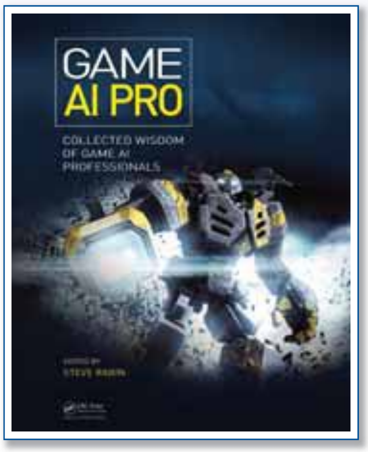
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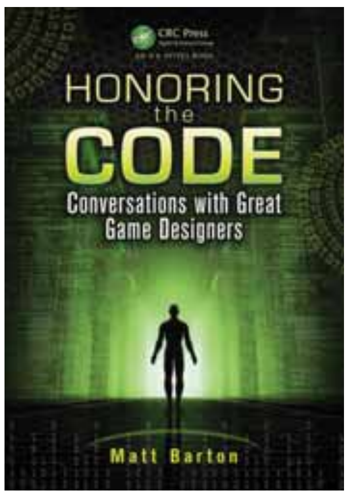
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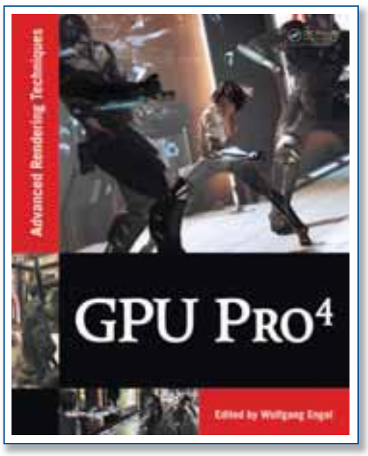
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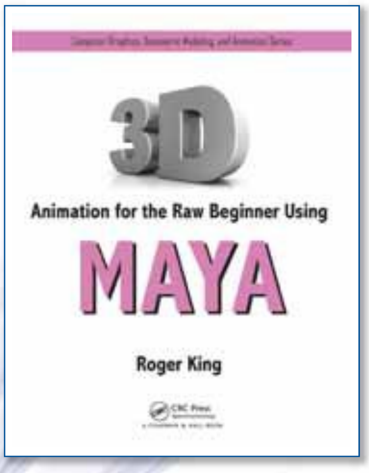
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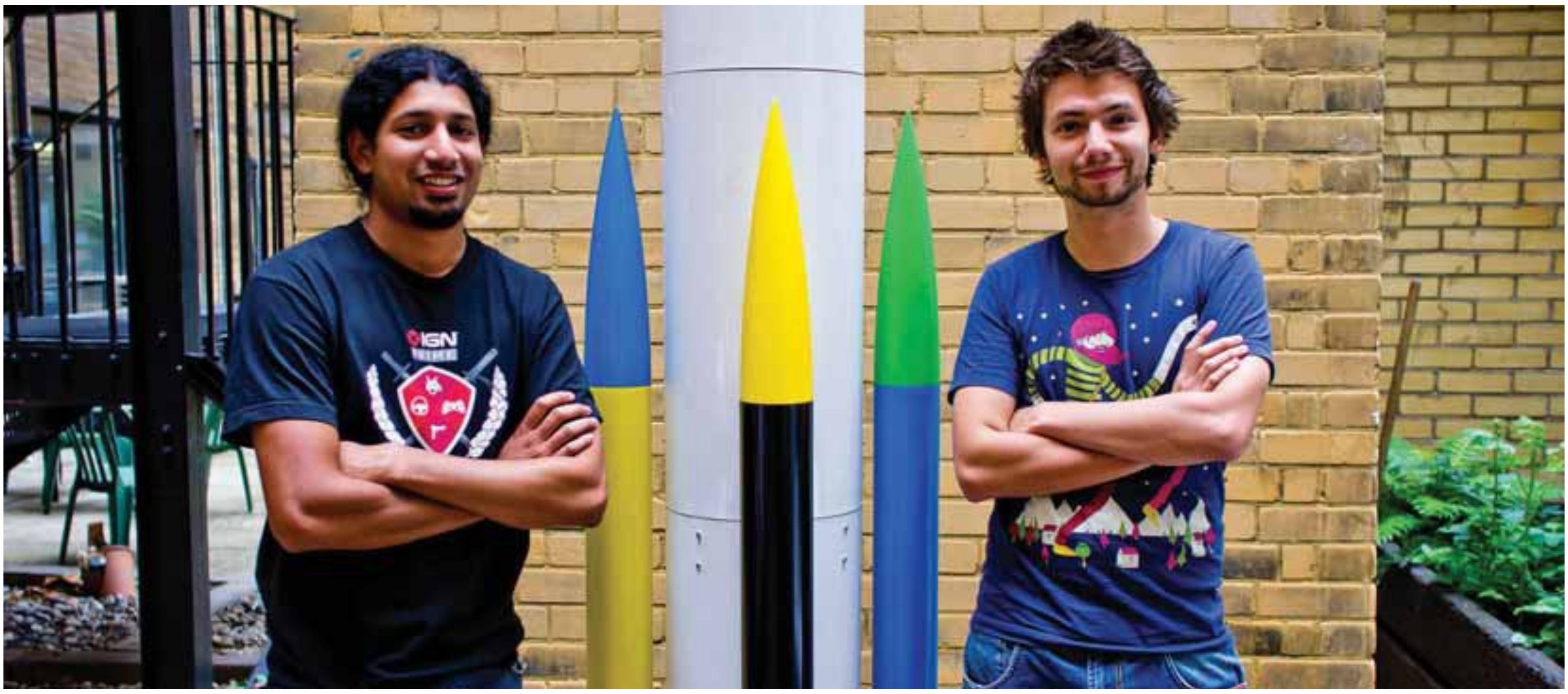

Dan Da Rocha (left) and Henry Hoffman (right) have used Windows 8 as a place to test game ideas

THE DUO OF developers that make up youthful studio Mudvark have had an impressive debut in the games industry.

Friends from university, Henry Hoffman and Dan Da Rocha both have award-winning games to their name. Hoffman led the team making *Mush* for the Dare to be Digital development contest, which ultimately went on to receive a BAFTA, while Da Rocha headed up Toxic Games, creator of *Q.U.B.E*, itself an accolade-winning title.

"We're still at those respective companies, but we're experimenting with this crazy new venture, trying to make great games faster, releasing often, improving and learning as we go," explains Hoffman of setting up Mudvark. "Games are super-iterative and you really miss out from the healthy dialogue with players when you're head-down engrossed in a multi-year project."

And the current project occupying the mindset of the Mudvark team? It's a physics puzzler named *Mortar Melon,* currently available on Windows 8.

A PROTOTYPE FOR SUCCESS

"For us Windows 8 was about testing the water," states Hoffman of the decision to debut on Microsoft's latest platform. "We knew that if we maintained a high-level of portability in our codebase, we could release on Windows 8 to get feedback, and then iterate for a full release on larger platforms."

It's an interesting approach to Windows 8, harnessing it as a platform for establishing a workable game model, and one many studios would do well to consider.

But as it happens, Windows 8 provided Mudvark with more than a testing bed for new game ideas. Presently *Mortar Melon* is nearing 150,000 downloads, and the rate of daily downloads continues to climb. In fact, so unexpected has the success been, that Mudvark are already readying plans to make more Windows 8 games.

And like many new studios embracing Windows 8, Mudvark is bolstered by the BizSpark program, which provides a wealth of games studios with free access to a generous suite of tools and support.

> ***We knew that if we maintained a high-level of portability in our codebase, we could release on Windows 8 to get feedback.***
> Henry Hoffman, Mudvark

What's more, Microsoft has also supported Mudvark in adopting the cloud through its Azure Mobile Services platform. Many still consider the cloud to offer smaller studios little more than streaming and storage, and while it capably does both those jobs, to indies and triple-A studios alike it can provide a wealth of other abilities.

"We're only just getting going with using Azure Mobile Services and didn't know much about it when we first got started," admits a frank Hoffman. "It soon became apparent that it's an incredibly valuable resource for storing data in the cloud, syncing across devices and providing a seamless experience. We'd looked at rolling out our own server system in the past, but I wouldn't trust ourselves when it comes to security or scalability. That's the main thing with Azure Mobile Services – peace of mind. It's incredibly easy to set up too, so it's a great time saver too."

HEADS IN THE CLOUD

Looking to the future, and inspired by their introduction to Azure, Mudvark's founders have bold plans for harnessing the cloud.

"We're planning to implement a deeper integration with a cross-platform level editor, so that future players can pick up any device and share their own levels with anyone. Windows 8 users can create and share custom levels with those on iPad and vice versa," explains Hoffman, who also intends to harness Azure's ability to sync data from user profiles, saved games, friends lists and achievements, as well as for supplying behavioural data and metrics.

Hoffman concludes with some advice for other studios considering making games for Windows 8. And it's guidance that should serve to put many minds at rest.

"I'd say not to get too caught up in reinventing the wheel. Windows 8 supports HTML5 games natively, and there's lots of fantastic game engines that allow for very quick prototyping and building. We use Construct 2, but there's also GameMaker, GameSalad or Stencyl, all of which have a very low barrier to entry and can produce just as excellent games."

Combined with BizSpark's arsenal of software, those accessible, affordable solutions mean Windows 8 could provide a truly tempting platform for all kinds of indie and small-scale studios.

For more information on the support available from Microsoft, visit **www.ubelly.com/gaming**. ■

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REQUIRED READING:

Honoring the Code: Conversations with Great Game Designers

In his new book, **Matt Barton** shares conversations with games development icons, including Ralph Baer, Brian Fargo and Jon Hare. Here we publish part of Barton's exchange with John Romero.

John Romero, famed games designer and co-founder of FPS pioneer id Software

INTERVIEWING JOHN ROMERO is like asking forty questions of a hurricane.

At 45, Romero still has the energy, enthusiasm, speed and desire to blow things up as of a 16-year-old. Even at crowded Game Developers Conferences, he's easy to spot, zooming from booth to booth and surrounded by a crush of adoring fans eager for autographs, insights, or perhaps a lock of his famous mane of hair. Anyone who doesn't know his work can be brought around quickly enough: "What? You don't know? That's the guy who did *Doom*, *Quake* and *Wolfenstein 3D*! Duh!" That's right. John Romero is one of the core members of id Software, the tiny company that single-handedly introduced the world to the first-person shooter. But more than anything else, he's the rock star of the gaming industry. Unlike the vast majority of developers – including his fellow id founder John Carmack, who seem to shun attention and personal publicity – Romero revels in the spotlight, thoroughly at home in a big crowd of fans. He stands out in this often quiet and reserved profession, always dressed in stylish clothes that probably cost more than my car – and a hairstyle that wouldn't look out of place on the cover of a romance novel.

I first met John at a hotel in San Francisco, at the Game Developers Conference of 2009. My friend Bill Loguidice and I were there to interview developers for a documentary film, and Romero was an hour late. Everyone else was ready to call it quits and go home, but I insisted that we wait. Eventually, John texted to say he was on his way. Another hour later, he rushed into the room and began talking like a machine gun. Even though none of us had ever seen him before, he conversed with us like old friends, and when Bill mentioned some obscure game for the Apple II, John's eyes lit up like a demon. As much as John loves the high-tech, cutting-edge stuff that defines his own contributions to the industry, his first and greatest love will always be the old Apple computers and games played by a few hundred people.

> ***"Looking over the students' shoulders, I saw Apple IIs had colour and made noise – the terminals didn't do that."***
>
> John Romero, Loot Drop

But John Romero hasn't forgotten anything or anyone. Pioneering Apple II programmers such as Bill Budge (*Pinball Construction Set*), Jordan Mechner (*Prince of Persia*) and Nasir Gebelli (*Gorgon*) mean as much to Romero as Chuck Berry, Buddy Holly and Elvis Presley meant to The Beatles. After two intense but enjoyable hours of interviewing, John treated us to dinner, quizzing us about every game ever created for the Apple II.

At one point, he handed me the earbud of his iPhone and challenged me to identify the tune playing on it. I instantly recognizsed it as the theme from *Spelunker*, an obscure 1983 platform game by Tim Martin. It was a bonding moment.

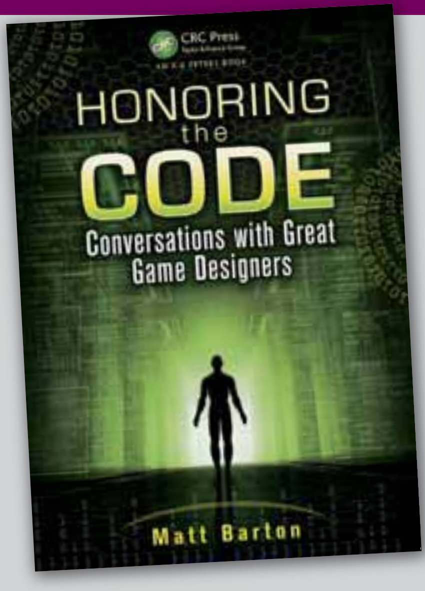
The following interview took place in February 2010. Unlike the previous interview, during which we focused on general questions about the games industry, this time I wanted to zero in on his own life and career, to learn how someone like us becomes someone like John Romero.

How did you learn to program, John?
Let's see. When I started programming in 1979, the first computer I saw was a mainframe [at Sierra College in Rocklin, California; John was 11-years-old]. There was a terminal connected to a mainframe that was in the next room – it was an HP 9000, a massive, room-filling computer.

The room next to it was full of terminals, all connected to it on a time-share system. The next room was full of Burroughs computers,

Romero worked on the influencial FPS Doom (left), himself having been inspired by classics like Lode Runner (above)

THE BOOK



Title: Honoring the Code: Conversations with Great Game Designers

Author: Matt Barton **Release:** April 2nd, 2013

Publisher: CRC Press

IF YOU'RE LOOKING to be successful in any area of games development, much can be learned from the experience of the industry's finest. In *Honoring the Code: Conversations with Great Game Designers,* 16 of the sector's most prominent developers share their stories, offering advice for anyone aspiring to a career in making games.

Matt Barton's book provides a chance to learn from the triumphs and failures of games design's most influential minds, as well as delivering numerous unique and sometimes deeply personal insights. **www.crcpress.com/product/isbn/9781466567535**

which, I don't know what they ran – maybe CP/M. I never even used it and nobody else did, either.

There was another room, but they didn't put anything in it until 1981, two years later. Finally, they filled it with Apple IIs. That was when I first saw the Apple II.

Looking over the students' shoulders, I saw that it had colour and it made noise – the terminals didn't do that; they were black and white, and text only. It sounded like it could do something, and I had never seen an Atari or a Commodore 64 at this point, so it was still pretty early.

Anyway, I started asking the students what commands they knew for turning on the screen, colours, and dots, and lines and all that stuff. Most of them didn't know, but some of them did, and I wrote down HGR, plot, colour, all that kind of stuff. Then I started to just play around with it. I was in ninth grade.

I was up there at the local college because they had a computer, and playing games for free was great. I didn't have a lot of money. I was just delivering papers, and that didn't make that much. I spent all the money I made on *Pac-Man*.

These computers didn't have many games on them. But there was a place called Capital Computers in the next town over. That was pretty much an Apple store, and they had the games in Ziploc baggies hanging off the wall. It was funny because it was a big empty store with stuff hanging off the walls and nothing in the center eating up space. I remember seeing *Pegasus 2* for the first time. I thought it was pretty cool even though it was mostly a black-and-white game. It was neat because it let you create your own levels with the paddle. You could create your own heights for terrain and then play through your own level. I thought this was really, really smart. Did you ever see *Pegasus 2?* It was the first game that I'd seen [with a level editor] until *Lode Runner* [by Douglas Smith].

> ***"I was just delivering papers, and that didn't make that much. I spent all the money I made on Pac-Man."***
>
> John Romero, Loot Drop

No. Was the editor anything like the one in *Lode Runner*?

An interesting story about *Lode Runner* – do you know what the original name of the game was?

No idea.

The original game was *Miner*, before Doug sent it to Broderbund. Doug lived in Seattle and was older than the other kids in the neighbourhood.

A couple of the kids used to come over and test his games for him – like a free QA team. They thought his game was just awesome. They wanted to make the levels, too. So Doug thought that maybe he should put a mode in that let you make levels. So he did, and those kids made a ton of the levels that were in the game – it wasn't all Doug. It ended up that one of these kids was Daron Stinnett, the executive producer of *Dark Forces*, *Jedi Knight* and *Outlaws*, so he's been involved in games for a long time, and it all started on *Lode Runner*. ■

To read more of Barton's lengthy interview with John Romero, and 15 more games design luminaires from every side of the industry, visit the CRC Press website (see panel, above).

Matt Barton is an assistant professor of English at St Cloud State University in St Cloud, Minnesota. His research interests include new media, computers, composition, rhetoric and gaming. He is the author of several books and papers. **www.mattbarton.net**

HEARD ABOUT

Jason Graves tells **John Broomhall** what it was like to compose Tomb Raider's score

Tomb Raider
Developer: Crystal Dynamics
Publisher: Square Enix
Platform: PC, PS3, Xbox 360
www.tombraider2013.com

In scoring the new Tomb Raider (main image), composer Jason Graves had a specially crafted audio sculpture made, resulting in a hugely distinct audio backdrop

JASON GRAVES IS a very careful driver, so can presumably be forgiven for very nearly back-ending the car in front on hearing news he'd successfully landed one of the most prestigious scoring gigs on the planet.

Graves had just been asked to compose the score for the next Lara Croft release, simply titled *Tomb Raider*.

From the outset, Graves found audio director Jack Grillo and music director, Alex Wilmer to be kindred spirits.

"Everything they were proposing about the role and placement of music just had me smiling and nodding my head," confirms Graves, who reveals that a thematic score would be the order of the day with the music team. Similarly, supporting the intensity and stress of combat, and wanting to focus on the emotion of a Lara Croft just starting out, fresh from college – not tough and invincible, but a vulnerable archaeologist, was a key concern.

"I was apprehensive about the main theme and figured it would go through 20 or 30 iterations, but amazingly, my first solo piano composition survived intact, after some experimentation to put it through its paces with mock-ups showing how it would sound as a big action cue, or a more heroic, positive piece," says Graves.

Throughout, Grillo and Wilmer demonstrated a continual openness to new approaches and a determination to evaluate the composer's music in context.

"I loved the fact that Alex never said: 'This is how we're going implement music throughout. We have to follow this model'," explains Graves.

"He was receptive and encouraging – the absolute life-blood for a composer."

TIME WELL SPENT

Graves also benefited from another relative luxury – that of time. Working on the three-and-a-half hours' worth of music content over a two-year period allowed him space to walk away and 'cleanse his musical palette' before returning with renewed vigour.

> ***"A combination of layered interactive cues and micro-scoring means the music is very interactive and progressive."***
> Jason Graves, Composer

"I was able to compose as the game came online chapter by chapter. We would walk through the game so I could be inspired by and compose to the title itself with its amazing cinematic graphics. We kept focusing on Lara's 'arc', thinking about how themes could develop as she developed. They would implement music, we'd play through again, talk about it, and tweak it. It was really the best case scenario."

To find oneself working on such a beloved, iconic title with time and ample creative freedom is likely a rarity in the pressured business of triple-A game production, but for Graves, the level of trust afforded to him was key, and something he readily agrees may be lacking somewhat elsewhere in the industry.

"I guess if you trust a composer to give you something new and different, that's going to be scary for some people who may feel they need to be in control of every detail, hemming you in with temp tracks and safe choices," states Graves.

When it came to creating something original, Graves, with the enthusiastic support of the team, decided to commission a playable sculpture known simply as 'The Instrument'.

"Some months into production, I was working on combat and exploration music and scavenging stuff from my yard to create percussion sounds – plant pots, the garbage can, a leftover roll of fencing – all invited into the studio to be 'performed' using various sticks and mallets," offers Graves. "But there's only so much you can get from a pot. I was aware of sculpture artist Matt McConnell, and his work via Facebook. I liked his aesthetic so contacted him to discuss the possibility of an all-singing, all-dancing mad percussion instrument-cum-sculpture. Improbably, it turned out he lived on the next block.

"It was a great collaboration," Graves continues. "He's a super guy whose workshop I can walk to in minutes."

INSTRUMENTS OF CHANGE

McConnell's workshop enables him to weld metal, make glass, build with pipes and create all manner of contraptions. That meant Graves and his new creative collaborator could work together on the kinds of sounds needed. They quickly went about categorising those into sections: metal instruments, glass instruments and so on.

"Having studied the concept art, he came up with a design for a sculpture that you could play which would provide a sonic signature for the score," states Graves. "A good example is the first 10-to-15 minutes when you're inside this cave trying to escape. More or less that entire section's music was created using the sculpture – layer upon layer of me hitting and bowing it. The bowls on 'The Instrument' hit very softly with yarn mallets, plus lots of reverb, became like the island's voice – it's a constant throughout – a device to underscore the mood and plot progression. A character will say, 'We're never going to get off this island,' and you'll hear that resonant, ritualistic sound.

"A combination of layered interactive cues and micro-scoring means the music is very interactive and progressive, constantly moving forward – the way a movie would be working. Although it wasn't my goal to sound like a film, nevertheless, I really love the resulting effect where the music kind of takes a step back and works more subtly. It supports the game, but it's not in your face – and I think that's the best of both worlds." ■

John Broomhall is an independent audio director, consultant and content provider.
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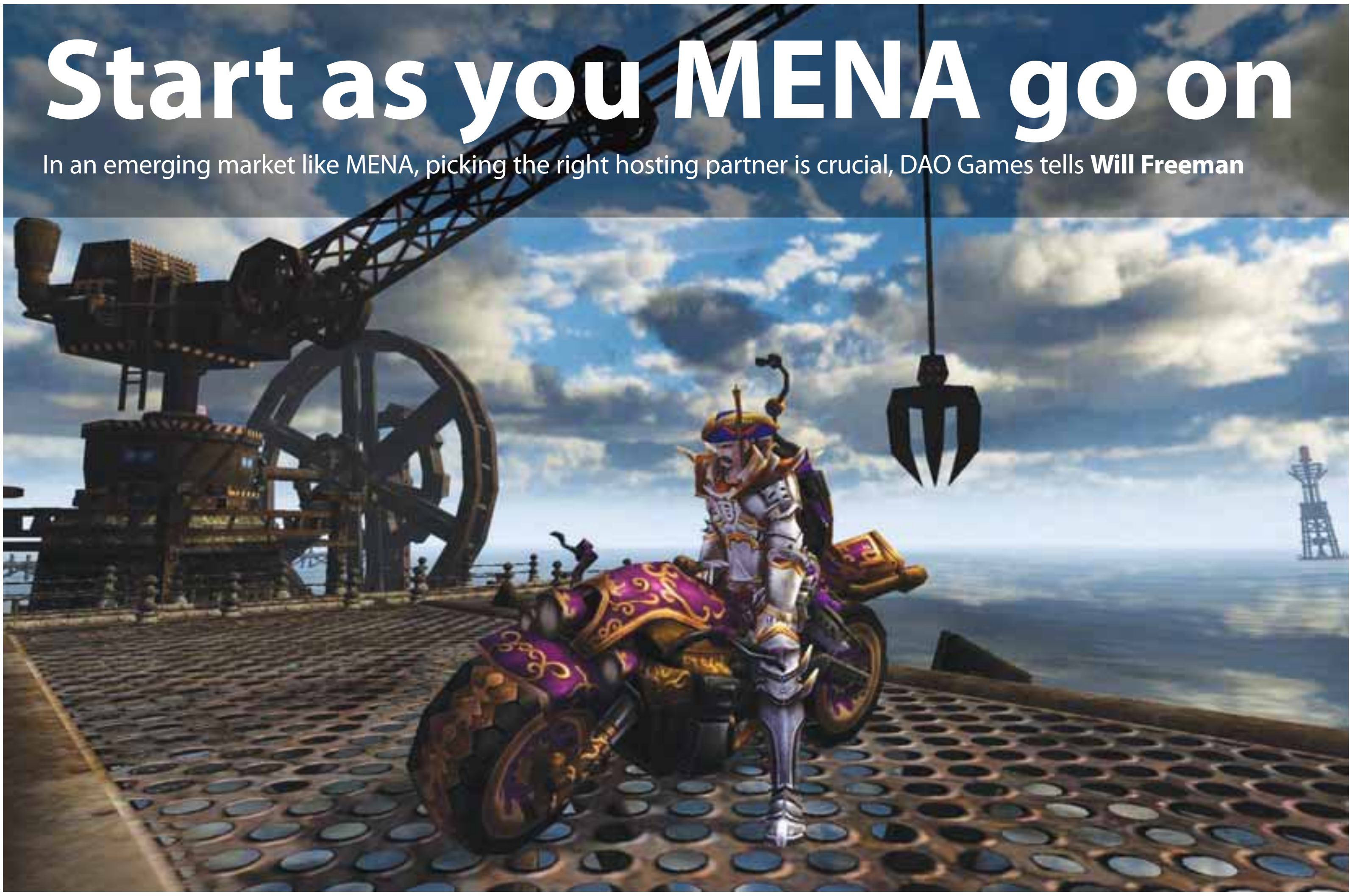
Start as you MENA go on

In an emerging market like MENA, picking the right hosting partner is crucial, DAO Games tells **Will Freeman**



City of Steam, which runs on Leaseweb technology (main), and (top-to-bottom) Paul Grimwood of Leaseweb and Peter Kwisthout of DAO Games

EMERGING MARKETS, SUCH as Brazil and the Middle East, are famed for the opportunity they offer games companies with a little pioneering spirit.

But equally, they present some of the industry's biggest challenges, exhibiting as they do limited infrastructures, fledgling ecosystems and numerous cultural intricacies to master.

But the Middle East and North Africa – or MENA – region has let DAO Games tap into an enormous potential market. The company, which includes Turkey's burgeoning market within its remit, was established last year by two experienced executives from the IT sector who happened to be dedicated traditional gamers.

Their focus is on licensing online games from studios across the globe, localising those titles, and marketing and promoting them being using the team's experience of the area.

A GAP IN THE MARKET

And the business came from spotting a gap in the market.

"At DAO we can see that what is available today, in terms of the quality of games and experiences in the free-to-play space for the mid-core to hardcore gamer, offers choices that are extremely limited," explains Peter Kwisthout, DAO's CEO and co-founder. "The games that do come out here are very popular, and people continue to play it but they aren't aware of other games available for those people in their language."

To put that opportunity in context, DAO believes some 49 million games exist in the region that stretches from Oman to Morocco, with 106 million regular internet users potential ready to embrace the pastime.

DAO's focus on mid-to-hardcore gamers means its prime concern is both browser and client games, with many, such as ZQGame's *The Lost Titans* and Mechanist Game's *City of Steam* hailing from China.

> ***"To operate in MENA, it's important to have partners like Leaseweb that can offer quality, reliability and professionalism."***
>
> Peter Kwisthout, DAO Games

"Why these online games of this kind are becoming popular is because, in places like China now, they have reached a level of quality, features and innovation that, to me as a gamer, I just didn't see two years ago. Now these online games are ready for the West, and starting to be noticed here."

TO SERVER AND PROTECT

But bringing triple-A browser and client games to the MENA region does mean a studio or publisher must be able to rely on a reliable game delivery network.

"Publishing in this region, and having the right backend – it can be a very complex animal, and so we can't afford to have a weak link in our business model," explains Kwisthout. "In this online gaming environment, if things don't work players will quickly turn away, and if the monetisation isn't working your business won't make money. So we had to make a very careful choice with the servers we used."

And it was that logic that lead DAO to Leaseweb, the giant of hosting that provides a portfolio of hosted infrastructure solutions including traditional dedicated server hosting, cloud and collocation.

"We just cannot afford to have servers with frequent downtime," elaborates Kwisthout. "Because myself and my business partner come from the B2B IT space, we know the cost of downtime. And we are confident that with Leaseweb we have a very strong partner."

And, says Kwisthout, the MENA region makes choosing the right hosting partner all the more important.

"Because we are serving a region that is not as mature as Western Europe, it's even more important to have partners like Leaseweb that can offer quality, reliability and professionalism," he says. "There is a great need for that here, due to the working practices of some of the companies here."

"From our perspective, we deal with a lot of MENA regions companies, so when DAO Games approached us, we told them that we host another company here called Game Power 7, and so we know that what companies from the MENA region need is a high quality service at the best possible pricing point, because at the end of the day, that's what's needed everywhere in life," added Paul Grimwood, global business development manager of gaming at Leaseweb. ■

www.leaseweb.com

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RECRUITER HOT SEAT

Tarsier Studios, the Malmö developer behind LittleBigPlanet PS Vita, is on the rise, and is in need of fresh talent. HR manager **Jenny Berg Nilson** tells you what to expect

What are the benefits of working at a studio such as Tarsier?
As well as the fact that we do amazing games and have a blast while doing it, you also have the benefits that come with working at a smaller studio. With around 40 people in the studio, you have no trouble knowing all your co-workers by name and the atmosphere is friendly and personal.

The organisation is also quite flat, meaning that you are always just one person away from top management. You have the ability to influence your working situation, and to a certain extent the project. We have a strong relationship with Sony and get to work with great franchises, such as *LittleBigPlanet* as well as develop our own IPs.

How many staff are you currently looking to take on, and from what disciplines in particular?
Right now we are around 45 people split across two offices; one small office in Karlshamn with nine employees, and one in Malmö where the main production takes place.

We are looking to fill four positions right now: senior designer, technical lead, senior animator and associate producer. But we always keep an eye out for talented people in all fields.

What perks or privileges are available to staff working at your development studio?
Six weeks of paid vacation yearly, paid bank holidays, private company health care, a great package of health insurance and occupational pension, subsidised fitness grant, breakfast every morning, flexible working hours, fresh organic fruit and up to 24 days of competence development a year. We also have a custom built entertainment room with a game and film library available 24/7.

What should aspiring developers do with their CV or application documents to get an interview?
First of all attach your portfolio. We always want to take a look at previous work, and make sure you select the best part of you work. Insure that the CV is written in English, and, personally, I really like when there is a photograph of you – it makes it easier to remember the person.

Who is the best interviewee you have ever had, and how did they impress you?
When I found a perfect candidate for the position with the right competence and mind-set, and the feelings were mutual. That feeling is really incredible.

And who was the worst?
A person who told me that he only saw the position as a stepping stone, since he was aiming for a lead position. He did not get the job.

Or the time when a candidate told me the he had the best game idea ever and we were so lucky that he wanted to work in our company. He really thought that he was a game design genius. I don't have to tell you that he did not really have much experience in games development.

BIO
Name: Jenny Berg Nilson
Title: HR Manager
www.tarsier.se

> ***"With everything that is going on in the industry today, we can never know how things will look in a few years, so we have to be prepared for anything."***
>
> Jenny Berg Nilson
> Tarsier Studios

GET THAT JOB

Development specialists offer advice on how you can bag that career leap

THIS MONTH: DATA ANALYST

"Think on your feet: problem-solving skills are a must. You'll often find that you have to look at the same problem across different games and approach them differently.

"Know your audience: a proven record of presenting to all levels within a company is a valuable asset. The data analysed is only as good as how you present it. Keep in mind who you're presenting to and don't overwhelm them with concepts they don't understand.

"Be passionate about your work: understanding and enjoying games is key. Being able to have the added insight of not only being able to crunch numbers and mine data, but also appreciate how it directly affects things like gameplay is probably the best tool of them all."

Chris Kelly
Data Analyst, Tag Games

SIX-SECOND STUDIO SPOTLIGHT

- Lady Shotgun Games was set up in 2011 by Anna Marsh and Sarah van Rompaey, former Eidos devs who went freelance to work more flexibly around childcare
- It is based in Derby, UK, but aided by a team of freelancers from four countries
- Currently focused on smartphone and tablet games
- It is now porting 2012 iOS release *Buddha Finger* to other platforms with the help of fellow indies, Lemon Moose Games
- "I like designing for the touch screen. It's such a direct and even intimate interface," says Marsh, co-founder and design director
- LSG's next game will be F2P, with more of a narrative element

www.ladyshotgun.com

What advice would you give perspective developers for a successful interview?
Make sure you know as much as possible about the company and try to find out if you really believe you and the company are a good match. Look at it as a relationship. You don't want to be together with someone you don't really like, do you?

It is also important that your own values and the values of the company are similar. If they match, the marriage will be a lot happier and you will have fewer conflicts. Try to find out what kind of games the company is developing, and also what games they will never develop so you don't get disappointed and hope for something that will never happen.

If your studio has recruited talent internationally, what was the process like for you, and for the applicant themself?
At least two interviews over Skype to begin with, and the third time we fly the candidate over so we can meet in person. We show them our office and the candidate can meet the other members of staff.

For some key roles we also want the candidate to do a personality test. If the candidate is from outside of Europe, we have to involve the Swedish Migration Board and the applicant normally needs to seek a work and residence permit from their home country, and sometimes also a visa. When everything is sorted out and the candidate is getting on board we provide relocation support. If needed, we help the candidate to get a place to stay, since we know that this can be difficult for applicants to sort out from a distance.

And how have your recruitment needs changed?
We are aiming to build a tight, flexible workforce consisting of talented and versatile people who can adapt to any circumstance. We really value people with the ability to take on new tech and who can easily switch focus on both technologies and projects. With everything that is going on in the industry today, we can never know how things will look in a few years, so we have to be prepared for anything.

Is there anything else you wish to add about recruitment?
One thing that is worth mentioning is that there is a lot going on in our region right now. The Copenhagen-Malmö region is bustling with games and media companies, ranging from small start-ups to global players.

Organisations such as Media Evolution are blurring the borders between media industries and companies, paving the way for dynamic future collaborations that will further increase our chances to adapt to the ever changing landscape of games and media. At the same time, Malmö is branded as one of the greenest cities in the world, and is paving the way for sustainable development. People are coming here from all over the world to be part of this, and the future of the region is looking bright indeed.

NEW STUDIO ALERT!

A DESIRE TO be in charge of their own destinies is what led Michael Humphrey and his fellows to found Sawfly Studios.

"Collectively, we have a passion for the creative process of games development and creating compelling gameplay experiences," says Humphrey, the studio's managing director and designer, who is finding the event of being in a start-up very liberating.

The team formed soon after the closure of Studio Liverpool. Its other members include principle designer Karl Jones, lead programmer Andrew Jones and veteran artist Jon Eggelton.

Based in Liverpool, Sawfly is currently self-funded and is also involved in work for hire projects. Though yet to be announced, its first game will be coming to mobile platforms and possibly more than one handheld.

"We really want to avoid pigeonholing ourselves as a developer for a specific platform," says Humphrey. "We'd rather just be known as a developer of great games, and get our games out on as many platforms as we can so more people can enjoy them."

To Humphrey, today's studio closures are sign of transformation: "The truth is the games industry isn't dying, it's just changing into something else. At Sawfly, we felt that the best way to ride out the storm would be to stay relatively small and flexible, concentrating on making great games and then just see what happens."

"The most exciting thing for us is actually the way in which we have changed ourselves," he concludes. "We're excited by being a smaller entity within a rapidly changing industry. As we grow our company over the next few years, we will fight to keep this level of agility and creativity."
www.sawflystudios.com

MOVERS AND SHAKERS

This month: Microsoft, Four Door Lemon, Playground Games, Mike Bithell and Creative Skillset

MICROSOFT ■ Former Channel 5 executive **KATE BARNES** has joined Microsoft Studios' Soho Productions as executive producer.

Barnes will be responsible for the company's Europe, Middle East and Africa TV strategy, and will work on "innovating" two-way TV experiences similar to those seen in *Kinect Sesame Street* and *Kinect Nat Geo TV*.

"It's an amazing time to be joining not only Soho Productions but also Xbox as we look to evolve the content experience to meet the changing ways that audiences are consuming entertainment," she said. "Soho Productions is at the forefront of this and have already demonstrated their innovation and commitment in this space with *Kinect Sesame Street TV*."

Microsoft recently made several shifts to its UK division, hiring former EA Origin's UK chief **ROGER WALKDEN** as Microsoft Studios' chief of staff and **LEE SCHUNEMAN** as Lift London studio head. **SCOTT HENSON** was also named as its head of operations.

FOUR DOOR LEMON ■ Tech and services provider Four Door Lemon has welcomed back senior developer **TIM WHARTON**.

He is working on Four Door's in-house multiplatform engine and on tech for a new unannounced IP due for launch in 2014.

"The new project and tech behind it is a really exciting challenge, and I'm pleased to be part of the growing talented team," said Wharton.

Wharton joined the industry in 1995, working at Abstract Entertainment before founding Pineapple Interactive in 1997. He then went on to co-found FDL in 2005, before leaving for Ubisoft Quebec and EA Montreal in 2008. Since 2011, he has been working at Animoto on its cloud-based rendering engine, until rejoining FDL.

Four Door Lemon director Simon Barratt added: "We're really pleased to have Tim back at the company with us after his valuable experiences in Canada and working on some great non-games tech. We're making the last few additions to the team as we start our new self-publishing project."

PLAYGROUND GAMES ■ London-based Playground Games has hired **EDWARD WALKER** as a senior audio designer.

Previously, Walker worked at Codemasters on the BAFTA-winning *Grid*, *F1* and *Dirt* racing franchises. Before then he was involved in music composition, TV production and also ran his own recording studio.

"Playground has grown from strength to strength over the last three years. Being part of their future success and triple-A development is incredibly exciting," said Walker.

The studio has also taken on Yibo Liu as a vehicle technical artist and Stephen Edmonds as an online engineer.

Playground studio director Gavin Raeburn added: "I'm delighted that we can continue expanding our award-winning team and look forward to seeing what top quality developers like Stephen, Yibo and Ed can add to our future projects."

INDEPENDENT ■ Spirited creator of indie hit *Thomas was Alone*, **MIKE BITHELL**, has left Bossa Studios to got independent.

Bithell spent two years at the London developer, and successful launched the BAFTA award-winning *Monstermind* and the official *Merlin* game on Facebook. He will now focus on making video games on his own.

"A great deal of thanks needs to go to Bossa Studios. They told me in my interview that I needed to continue with the [*Thomas Was Alone*] project while working there. They supported me through development, and gave advice and support throughout and after release; awesome people it's going to be sad to step away from," said Bithell. "Thanks for the time and kindness you've given me so far in my adventures and fingers crossed you'll be there to play the next thing."

Bossa CEO Henrique Olifiers added: "While I am sad to lose such a talented member of the team, I am extremely proud to see Mike go his own way. Creating *Thomas* in his spare time was an unbelievable achievement and I have every faith that this is just the beginning for him."

CREATIVE SKILLSET ■ **KIM BLAKE** has been appointed next-gen talent development co-ordinator to drive forward recommendations from the 2011 Next Gen report into the video games and visual effects industries.

The post is joint-funded by games trade body UKIE and Creative Skillset. Blake will play a key role in helping the industry work with educators to improve the flow of new talent into the development sector.

"So many people are doing excellent work in this area; I'm really looking forward to working with them all to maximise awareness of the careers available, the skills needed and the opportunities that are already out there, as well as helping to foster communication between existing and new initiatives," said Blake.

Service & Tech Recruiter Hot Seat

Hansoft's marketing and PR director **Julia Hallin** on tools development and the doorways it can open for you in games development and beyond

What makes Hansoft different from other middleware companies?
I guess anyone would answer, 'our special atmosphere and company culture' to this question, but in this case it's really true.

I would also say we are working more closely with the market than most other tools providers. Our experts are continuously visiting studios all over the world, and our trailblazing development team is collaborating with some of the leading engineers and industry domain experts.

What benefits do you offer?
In addition to all benefits, retirement plan and parental leave stipulated by Swedish law, we have extra health insurance, occupational injury insurance, service group life insurance and six weeks paid vacation. We are also keen to focus on different action points for professional growth.

Other than that, we offer our employees massage services once a month during office hours, pay for their physical fitness training fee, and organise different company activities and events on a recurring basis.

What disciplines are you in need of?
We are expanding and in constant need of talented people, both on the development and the business side. One of the key positions we are searching for right now is a development manager, who will be leading our team, as well as being a part of the operations committee, which coordinates other functions.

What opportunities are there for career progression?
The opportunities here are unlimited. As we are recruiting more junior candidates, our current staff is expected to progress up the career ladder, acquire more influence and at the same time take more responsibility for the company's future.

Why should people choose a career in tools development?
Tools are not necessarily limited to one single industry. Currently, we are expanding in multiple domains, for instance, telecom, aerospace and space technology, which create both challenges and opportunities in keeping us abreast with current industry dynamics and market trends. I think it gives you a broader perspective and makes it easier to solve problems when you can look at common, best practices in other areas and find inspiration. I see it as a benefit, both from a company point of view but also a personal growth perspective.
www.hansoft.se

THIS IS WHERE WE WORK

Photography: BSK Arkitekter, Per Kristiansen

Mojang

Stockholm, Sweden
www.mojang.com

It's little surprise that the minds behind block-building craze *Minecraft* inhabit an office that reflects the games maker's dream at its most beguiling. Stylish and eccentric is how its creator sees 'Herr Mojang'.

Media Molecule

Guildford, UK
www.mediamolecule.com

Here, office dogs roam free and artistic flair is commonplace. Assorted textile lampshades, plush toys and all manner of DIY-makes display the sweeping playfulness of the studio behind *LittleBigPlanet*.

SERVICES SPOTLIGHT

This month: **Liquid Violet**

AS CREDENTIALS GO, they don't get much bigger for newly formed voice production outfit Liquid Violet than assisting Blizzard.

Established in 2011, and based in Soho, London, Liquid Violet aim to "take the pain out of any voice recording project", and video games are its speciality.

"We've been building and developing our tools and workflows across many different projects based on my 13 years of experience in the games industry," founder Adam Chapman (*pictured right*) tells *Develop*.

The voice production house provides consulting, planning, casting, recording, post-production and localisation services, all with a complete asset management system.

"We have a strong focus on the importance of casting, as well as the benefits of utilising technology to allow talent to concentrate on what is important – creativity," says Chapman.

We've already mentioned that Liquid Violet has worked with Blizzard. It was responsible for the final localised mixes for all the *World of Warcraft: Mists of Pandaria* cinematics, and Chapman says this is a prime example of the studio's practices.

"This went well because we truly understand the complexities of dealing with studios in multiple territories and are well placed to help in the most effective way possible. Our approach and experience allowed us to connect directly with each of the teams at Blizzard, which created a smooth flow of information.

> ***"We've got the expertise, the experience, the contacts and the facilities to deliver the best service possible."***
>
> Adam Chapman,
> Liquid Violet

"I've had the pleasure of working with the Blizzard teams on a few projects and we've built up a certain level of trust that allows for an excellent flow of ideas and processes between everyone involved."

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As well as working with Blizzard, Liquid Violet's previous work is just as worthy of note. It has provided casting, voice direction and post-production on *Dark Souls*; pre- and post-production on *Borderlands 2* and *XCom: Enemy Unknown*; and localised voice production for *Sniper Elite 2*.

A major part of its method is assessing where it can make things quicker and easier in order to focus time on the parts of production that are most important, which can mean some real variation in its approach from project to project.

Liquid Violet's immediate goals are to expand its scope to work on a broader catalogue of game projects and continue to develop in the UK as a leader in voice acting. It is also looking to add more partner studios across the globe, so it can extend its localisation aspect to cover as many emerging territories as possible.

"We've got the expertise, the experience, the contacts and the facilities to deliver the very best service possible. And we'll take all the pain out of managing the process, including the localisation side," assures Chapman. "Critically, we understand the issues, demands and pressures of voice work on all sides of the discipline – the developer, the publisher, the external service providers and the talent. We'll also manage all this with sensitivity, tact and pragmatism, and we'll always be able to work around the needs of the client to ensure the project goes as smoothly as possible."

Liquid Violet's production studio (below and left) has a multitude of tools to help it get the best quality for your game, such as Adobe Audition and Pro Tools

Liquid Violet's Adam Chapman

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TOOLS SPOTLIGHT

This month: **NaturalMotion Technology**

NATURALMOTION TECHNOLOGY HAS been producing animation middleware for over a decade.

The latest version of its core animation middleware is Morpheme 4. Available for current and next generation consoles, as well as mobile platforms, it is designed to be flexible and useful for any game that requires character animation.

NaturalMotion's CTO Simon Mack says an appreciation of performance and purpose are what separates it more other animation software.

"Unlike some middleware vendors, we believe that the runtime and the tools are equally important. Developers know that they can trust our code in their games, and animators enjoy using our authoring environment," he tells *Develop*. "Of course, we also have some unique features, including our comprehensive integration of physical simulation and other procedural nodes into the animation blending network."

Morpheme supports PC, PS3, Xbox 360, Wii U, iOS, Android and PS Vita. It has been used in dozens of games, ranging from mobile titles to triple-A console releases such as *GTA IV*. Version 4 is currently being used in some upcoming titles that the company plan to talk about later in the year.

Some of several major new features added to version 4 include solving some of the problems with integrating animation into AI and control systems.

> ***Morpheme 4 is the most advanced animation system, chosen by studios that demand the best quality characters.***
>
> Simon Mack, NaturalMotion

It has added its Scatter Blend parametric blending system, which allows animators to to trivially create complex animation blends which use real-world input variables. So, for example, the game can tell Morpheme

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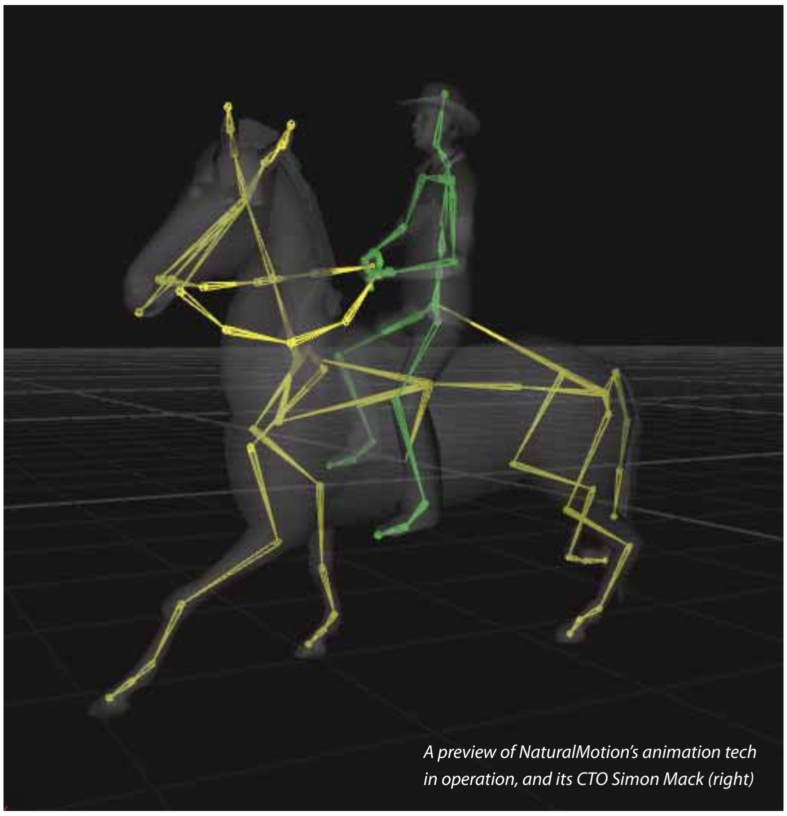


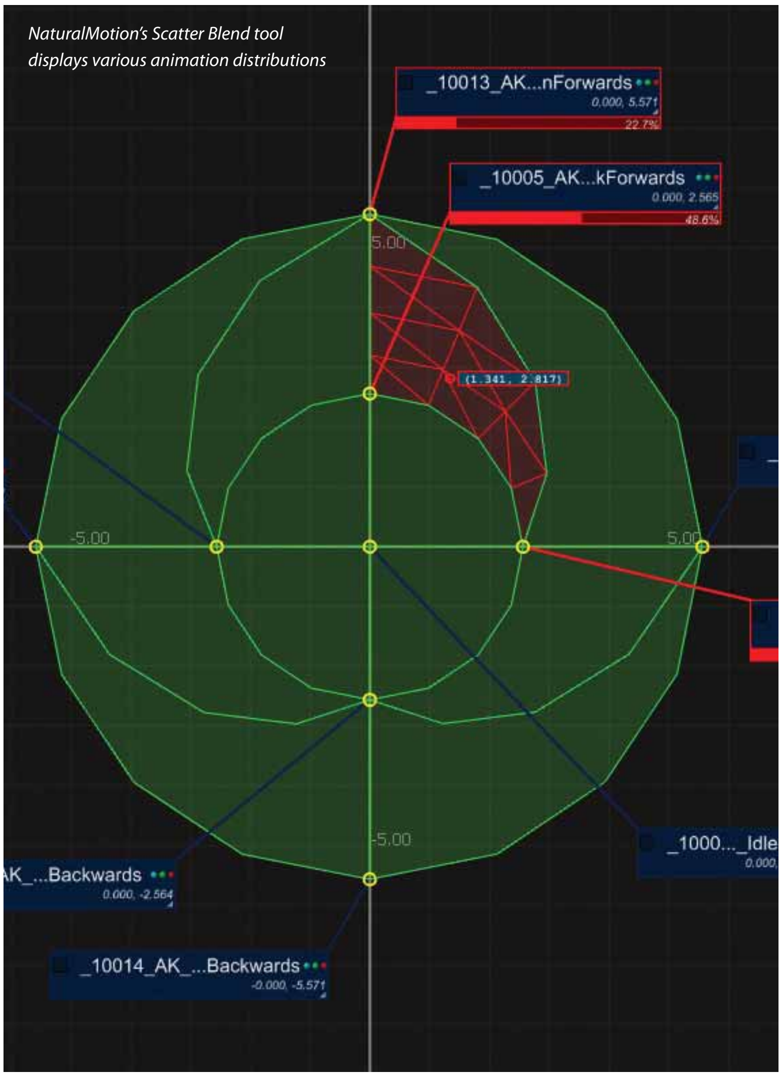
A preview of NaturalMotion's animation tech in operation, and its CTO Simon Mack (right)

that the character needs to be running at 4 m/s whilst turning 20 degrees/s, and the Scatter Blend will automatically blend the input animations to achieve that.

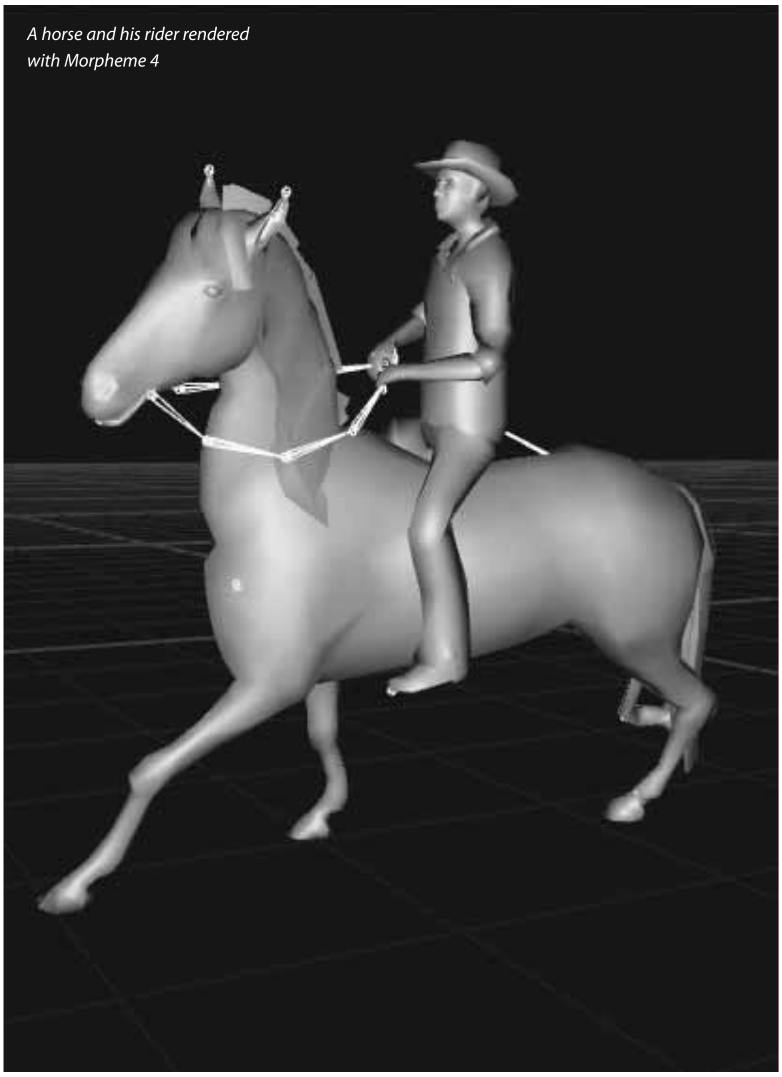
Another feature, Prediction Models, enables the game to query the capabilities of the animation network at runtime. So, for instance, you might have built a jumping system that blends a dozen animations together so you can control the angle and power of the jump motion. At runtime, the game can query the Prediction Model for this system and discover whether the character is capable of jumping 2m, and what angle and power inputs are required to achieve this. Mack is particularly excited to see what developers are able to build with that new technology.

With version 5, available this spring, NaturalMotion are introducing the option to add its dynamic motion synthesis technology, Euphoria, into Morpheme networks. Euphoria generates motion on the fly by simulating a character's motor nervous system, body and muscles, which allows developers to create fully interactive characters that are aware of their environment and able to respond and react intelligently.

"We hope that our new tools for integrating AI and animation will help to make a real difference to the industry," Mack concludes. "Morpheme 4 is the most advanced and comprehensive animation system, chosen by studios that demand the best quality game characters and the most flexible and powerful development environments."



NaturalMotion's Scatter Blend tool displays various animation distributions



A horse and his rider rendered with Morpheme 4

TRAINING SPOTLIGHT

This month: **DeVry University**

Games programming students at work in one of DeVry's computer labs

DEVRY UNIVERSITY IS one of the US West Coast's most respected institutes when it comes to games development.

DeVry's BSc in Game and Simulation Programming (GSP) is a software engineering programme with the goal of preparing graduates for programmer positions in the games and simulation industry, or other industries requiring skills in developing highly interactive, visual and audio-focused software.

Learning to work in a team is also one of the course's goals. There are individual and team assignments as well as four project classes. The junior projects tend to focus on students selecting pre-existing game designs and reworking them in 2D, while the senior projects are usually 3D-based and often include multiplayer modes using networked computers.

"We use C++ and Visual Studio exclusively," DeVry's department chair of Game and Simulation Programing David Walker (*right*) tells *Develop*. "The goal is depth of programming ability as opposed to breadth."

In addition to core structured and object-oriented programming, students learn DirectX, physics, AI, data structures, simulation, software engineering and game engine design basics. This is supplemented by a game design course, an introduction to computer graphics using 3D Studio Max and a level design course using Unreal Engine.

Most campus locations for the programme have a multimedia lab, giving students access to Adobe Master Suite and Autodesk Creative Suite. Most of its campuses also have an audio lab, sound booth, green/blue screens and games consoles. Android and Xbox SDKs are also scheduled to be added at some locations.

> ***"To get a programming job in the industry you must be productive from the day you are hired."***
>
> David Walker,
> DeVry University

Graduates of DeVry GSP course have gone on to work at large studios such as Electronic Arts, Namco Bandai, Gree and Disney/Playdom; smaller studios such as Mean Hamster and Coco Studios; and to other companies such as Total Immersion Software, Malwarebytes and Intel.

DeVry University has ongoing industry advisory committee meetings with representatives from the industry, who are asked to review its programme and offer suggestions.

"In my 30-plus years' experience in the video game industry, one thing has remained constant," says Walker. "To get a programming job in the industry you must be productive from the day you are hired. No one hires a game programmer for their 'potential'. They must be able to do the job they are hired for. Budgets and schedules are tight. There is no room for long training programs at most studios."

In Walker's view, what has changed are the skills and background needed to get an interview.

"At one time, if you had a proven record as a productive programmer, you could get an interview. Having a college degree, such as in engineering or computer science, has always given an applicant a 'leg up'. Today a college degree is almost always a requirement. Recently, some of the games industry listings specifically mention degrees in game development related fields.

"The trend is clear, if you want a career in the game industry, the best way to prepare for it is by getting a games development-related degree. But this must be combined with learning the skills and technologies being taught. The degree will get you an interview, but only your skill will get you the job."

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- Game Narrative
- GDC Education
- Independent Games
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[WEDNESDAY–FRIDAY]

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THE DEVELOP QUIZ

The scores are in for the most recent Develop Quiz, meaning it's time to run down the results from the industry's wildest networking get-together, and recognise the industry's brainiest devs

EARLIER THIS YEAR a wave of game development's brightest minds descended on the tri-annual Develop Quiz in London.

First Touch Games claimed victory and took the spoils with a consistently strong performance to pip some of their bitter rivals to the top spot.

Bossa Studios and Side battled it out for second place on a tie-breaker, with the latter having to settle for third place on the podium.

Teams clashed over topics including 'Maps and Radars in Games', 'Crossbows and Bows in games', 'Film Music in a Flash', and what proved to be the most challenging round; namely 'Working Titles of Films'.

Thanks must go to all the teams and the quiz's headline sponsor Microsoft for making the ever-popular night yet another great success.

As well as the main quiz prizes, Marmalade's Andrew Parker took home a Nokia Lumia 800 phone, donated by Microsoft and given out after a blind draw on the evening.

The next Develop Quiz will take place in London, UK on May 15th. If you want to join in on the fun, book now by contacting **Kathryn.Humphrey@intentmedia.co.uk** to avoid disappointment.

THE SCORES

Want to know the results of the recent Develop Quiz? Here they are in full

1.	WINNERS: FIRST TOUCH GAMES	55
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LOCALISATION SPECIAL
With an increasingly sophisticated global marketplace, the pressure is higher than ever to reach audiences in their first language. We speak to the firms making that happen

BUILD SPECIAL FEATURE: DISCOVERY AND DISTRIBUTION
With more new platforms to consider than ever before, the discoverability challenge is greater than ever. Experts offer insight into getting your game noticed

REGIONAL FOCUS: TEL AVIV

EVENTS:
Festival of Games, Amsterdam – April 23th to 25th

MAY 2013

THE FUTURE OF GAMES AUDIO
A fresh examination of music and audio for the games sector, from in-house teams and hardware to outsourcers

BUILD SPECIAL FEATURE: QA
How teams that stamp out bugs and ensure you pass certification work – and how to get the most out of them

REGIONAL FOCUS: HUNGARY

EVENTS:
Develop Quiz, London – May 15th
Nordic Game, Malmö – May 22nd to 24th

JUNE 2013

HR & STUDIO MANAGEMENT SPECIAL
Once you've secured the right team for your studio, there's plenty else to keep you busy. The experts explain how to make sure your staff are happy, motivated and productive

BUILD SPECIAL FEATURE: AI & CHARACTER BEHAVIOUR
An update on what's new in the world of atificial intelligence tools, and making characters behave more realistically

REGION FOCUS: IRELAND

EVENTS:
E3, Los Angeles – June 11th to 13th

JULY 2013

ANALYTICS SPECIAL
How do you balance creativity with developing by numbers? We tackle analytics' toughest questions

IMMIGRATION FOCUS
We analyse the global immigration trends impacting games developers, and talk to the field's experts

BUILD SPECIAL FEATURE: TECHNOLOGY FOR SOCIAL GAMES
A detailed look at the tools, analytics devices, platforms, and unique techniques that define how social games tick

REGION FOCUS: THE NETHERLANDS

EVENTS:
Develop Conference, Brighton – July 9th to 11th
Develop Awards, Brighton – July 10th

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THE FAQ PAGE: KEN LEVINE

Develop grills respected figures from the global games industry

Who are you and what do you do?
I'm Ken Levine, creative director at Irrational Games in Massachusetts, USA.

What are you working on right now?
BioShock Infinite.

What was the first video game or product that you ever worked on in the industry?
Thief: The Dark Project.

> ***"I think this is a golden time because we have all these platforms. I have a device on me at all times to play on, which was a dream I had when I was a kid."***

What was the first video game you can remember playing?
Spacewar.

What was the most recent video game you ever played?
Torchlight II.

What is your favourite game ever, and for what reason?
Either the *Xcom* series or the *Civilization* series, because they are both endlessly playable.

How many hours a week do you spend playing video games?
Fifteen hours a week.

Games continue to evolve and progress. In your opinion, what area of the games industry needs more 'investment' or added attention from those within it?
I think the level of awareness of products that we put out is, compared to a movie, in the basement. We don't usually get on talk shows because the amount of money spent on marketing is much less. We're still putting ourselves in a niche place where we don't need to be. But that's not an easy challenge. We need to make sure that we are telling our story to the broadest number of people.

What do you enjoy about the video games industry today?
I enjoy that it is still evolving as an art form and we're still figuring out how to do things. This industry hasn't been around for a hundred years, so there are still many things for us to discover.

What disappoints you about the video games industry today?
Not much. I think this is a golden time because we have all these platforms, such as consoles, PCs, iPhones, 3DSs and Vitas to play on. I have a device on me at all times to play on, which was a dream I had when I was a kid.

Of all the games you have worked on, which has been your favourite to contribute to?
It's a split between the *BioShock* series and *System Shock* series.

What game that you were not involved with would you most liked to have worked on?
Master of Magic.

What other video games developers do you most admire?
There are a bunch: Valve, Firaxis, Epic, Blizzard and Bethesda. The list goes on.

What hobbies, collections or interests do you have that are completely unrelated to video games?
I like to run, I like to eat and watch movies and read books and consume all kinds of media.

What is your favourite book, movie, TV show and album of all time?
Book would be *1984* or *Animal Farm*, both by George Orwell. Movie is *Miller's Crossing* by the Coen Brothers. TV Show would be *Mad Men*, and album, *Abbey Road* by the Beatles.

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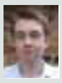
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